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U. S. NATIONAL BUREAU OF STANDARDS, A. V. Astin, *Director*

Theoretical Mean Activity Coefficients Of Strong Electrolytes in Aqueous Solutions from 0 to 100 °C

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Foreword

The National Standard Reference Data System is a Government-wide effort to provide for the technical community of the United States effective access to the quantitative data of physical science, critically evaluated and compiled for convenience, and readily accessible through a variety of distribution channels. The System was established in 1963 by action of the President's Office of Science and Technology and the Federal Council for Science and Technology.

The responsibility to administer the System was assigned to the National Bureau of Standards and an Office of Standard Reference Data was set up at the Bureau for this purpose. Since 1963, this Office has developed systematic plans for meeting high-priority needs for reliable reference data. It has undertaken to coordinate and integrate existing data evaluation and compilation activities (primarily those under sponsorship of Federal agencies) into a comprehensive program, supplementing and expanding technical coverage when necessary, establishing and maintaining standards for the output of the participating groups, and providing mechanisms for the dissemination of the output as required.

The System now comprises a complex of data centers and other activities, carried on in Government agencies, academic institutions, and nongovernmental laboratories. The independent operational status of existing critical data projects is maintained and encouraged. Data centers that are components of the NSRDS produce compilations of critically evaluated data, critical reviews of the state of quantitative knowledge in specialized areas, and computations of useful functions derived from standard reference data. In addition, the centers and projects establish criteria for evaluation and compilation of data and make recommendations on needed modifications or extensions of experimental techniques.

Data publications of the NSRDS take a variety of physical forms, including books, pamphlets, loose-leaf sheets and computer tapes. While most of the compilations have been issued by the Government Printing Office, several have appeared in scientific journals. Under some circumstances, private publishing houses are regarded as appropriate primary dissemination mechanisms.

The technical scope of the NSRDS is indicated by the principal categories of data compilation projects now active or being planned: nuclear properties, atomic and molecular properties, solid state properties, thermodynamic and transport properties, chemical kinetics, colloid and surface properties, and mechanical properties.

An important aspect of the NSRDS is the advice and planning assistance which the National Research Council of the National Academy of Sciences-National Academy of Engineering provides. These services are organized under an overall Review Committee which considers the program as a whole and makes recommendations on policy, long-term planning, and international collaboration. Advisory Panels, each concerned with a single technical area, meet regularly to examine major portions of the program, assign relative priorities, and identify specific key problems in need of further attention. For selected specific topics, the Advisory Panels sponsor subpanels which make detailed studies of users' needs, the present state of knowledge, and existing data resources as a basis for recommending one or more data compilation activities. This assembly of advisory services contributes greatly to the guidance of NSRDS activities.

The NSRDS–NBS series of publications is intended primarily to include evaluated reference data and critical reviews of long-term interest to the scientific and technical community.

A. V. Astin, *Director.*

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Theoretical Mean Activity Coefficients of Strong Electrolytes in Aqueous Solutions from 0 to 100 °C

Walter J. Hamer

In determining the activity coefficients of electrolytes in aqueous solutions from the freezing point to the boiling point of the solvent, various equations have been used in the treatment of the data. This paper gives values for activity coefficients of electrolytes of various valence types from 0 to 100 °C, and for ionic strengths from zero to 0.1 molal or 0.1 molar, as calculated by seven different equations based on the theory of interionic attraction. These equations are those of Debye and Hückel, Güntelberg, Davies, Scatchard, and Bjerrum, and what may be termed an extended Güntelberg equation and an extended Scatchard equation.

Key words: Activity coefficients, electrolytes, interionic attraction expressions.

1. Introduction

The mean activity coefficients, on a volume and weight basis, for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 completely dissociated electrolytes in aqueous solutions, as calculated by seven widely referred to theoretical equations are given for ionic strengths of 0.1 and less and for temperatures from 0 °C to 100 °C, inclusive. The theoretical equations employed are those of (1) Debye and Hückel, frequently referred to as the limiting law of Debye and Hückel, (2) Güntelberg, (3) Davies, (4) Scatchard, (5) Bjerrum, and what may be called a (6) modified or extended Güntelberg expression and a (7) modified or extended Scatchard expression. Although these equations reproduce experimental results exactly only in rare cases, they are of value as an aid in rapid interpretations of literature data where expressions, such as "activity coefficients were calculated by the limiting law of Debye and Hückel," or "activity coefficients were calculated by the Davies equation," or "Bjerrum ion sizes were used to calculate activity coefficients," or "Scatchard has suggested that a better average of the higher virial coefficients would be provided by a $1+1.5\ m^{1/2}$ term" [1] [1] are encountered. They are also of use in estimating a value for an activity coefficient if an experimental value is not available.

2. Chemical Potentials, Activities, and Activity Coefficients

For closed isolated systems to which no matter is added or withdrawn thermodynamics give:

$$dU = TdS - pdV$$

where U is energy, T the absolute temperature, S the entropy, p the pressure, and V the volume.

For an open system to which matter may be added or withdrawn (for example, addition of a salt to water or removal of water from a salt solution by evaporation) Gibbs gave (Gibbs used different symbols):

$$dU = TdS - pdV + \mu_A dn_A + \mu_B dn_B + \cdots \mu_Z dn_Z$$

where n represents the number of moles of component A, B, etc., represented by subscripts and the μ's represent the Gibbs' "chemical potentials" of the various components. Since from thermodynamic considerations,

$$G = U - TS + pV = \text{Gibbs energy}$$

$$H = U + pV = \text{Heat content}$$

$$F(\text{or } A) = U - TS = \text{Helmholtz energy}$$

the Gibbs "chemical potentials" for component A, for example, may be defined in a multiplicity of ways as follows:

$$\mu_A = (\partial U/\partial n_A)_{S,V,n'} = (\partial H/\partial n_A)_{S,p,n'} = (\partial F/\partial n_A)_{T,V,n'} = (\partial G/\partial n_A)_{T,p,n'}$$

where n' now represents the constancy of all components except component A. Thus, Gibbs' "chemical potentials" can be expressed in various ways depending on what conditions are held constant during an experiment. The last equality is the one generally used in defining the "chemical potential" in that experiments may easily be designed wherein the temperature and pressure are maintained constant. It is inconvenient to conduct experiments at constant volume and temperature, under which conditions the third equality applies; and it is indeed difficult to conceive of ways to conduct experiments either at constant entropy and volume (first equality) or at constant entropy and pressure (second equality).

[1] Figures in brackets indicate the literature references on page 5.

Since the energy, entropy, heat content, Helmholtz energy, and Gibbs energy are defined only by differential equations, we can determine only differences of these quantities between two states of a system containing the same quantity of matter. It is therefore customary to tabulate the differences from some standard state, which is equivalent to an arbitrary assumption that the various functions are each zero in the standard states. For general purposes it is customary to assume that the energy, or the heat content, of each element at some standard temperature, usually 25 °C, and some standard pressure, usually one atmosphere, and in its most stable form under these conditions is zero. This same standard state may be adopted for the entropy, Helmholtz energy, and Gibbs energy, although the entropy is sometimes taken as zero at absolute zero in accordance with the third law of thermodynamics. A knowledge of the individual heat capacities and volumes permits the calculation of these quantities under other conditions.

The same considerations apply to the chemical potential, i.e., only differences from an arbitrarily selected standard state can be determined. Throughout this evaluation the chemical potential shall be defined in terms of the partial molal Gibbs energy (fourth equality in equation above). The difference in chemical potential between two states (compositions) of an *ideal solution* is given by:

$$\mu_i - \mu_i' = RT \ln \frac{p_1}{p_i'} = RT \ln \frac{x_i}{x_i'}$$

where i = component i and p and x denote, respectively, the vapor pressure and mole fraction. If one of the compositions is the pure component with $x_i' = 1$, $p_i' = p_i^0$, and $\mu_i' = \mu_i^0$, then

$$\mu_i = \mu_i^0 + RT \ln \frac{p_i}{p_i^0} = \mu_i^0 + RT \ln x_i.$$

where the relative vapor pressure of component i is equal to the mole fraction of component i. For *real or nonideal solutions* this equation becomes

$$\mu_i = \mu_i^0 + RT \ln \frac{f_i}{f_i^0} = \mu_i^0 + RT \ln a_i$$

where a_i is the activity of component i and defined as the relative fugacity, where f denotes the fugacity or corrected pressure.

For solutions of electrolytes the standard state is usually chosen so that the ratio of the activity to the concentration is equal to unity at infinite dilution where the laws of ideal solutions are obeyed. G. N. Lewis [2] called this ratio the activity coefficient, thus $a = x\gamma_x$.

It is more usual, however, to express the composition of a solution either in terms of concentration (molarity), c, i.e., moles of solute per liter, or as molalities, m, in moles of solute per 1000 grams of solvent. In each of these cases, the numerical values of the activity coefficient differ from those expressed on the basis of mole fraction; γ_c and γ_m are used here to denote the activity coefficient on the molarity and molality scales, respectively. The relations between γ_x, γ_c, and γ_m are given by:

$$\gamma_x = \gamma_c(d - 0.001\ Mc + 0.001\ M_s c\nu)/d_0$$

$$\gamma_x = \gamma_m(1 + 0.001\ \nu m M_s)$$

$$c\gamma_c = d_0 m \gamma_m$$

where d = density of solution, d_0 = density of solvent, M_s = molecular weight of solvent, M = molecular weight of solute, and ν = the number of ions into which one molecule of the solute dissociates.

As electroneutrality must prevail in electrolytic solutions, the activity of an electrolyte that ionizes into ν_+ cations and ν_- anions is given by:

$$a_{\text{salt}} = a_2 = a_+^{\nu_+} \cdot a_-^{\nu_-} = a_\pm^{\nu}$$

where $\nu = \nu_+ + \nu_-$. Therefore, for an electrolytic solution, the mean activity of the ionized electrolyte, $a_\pm$, would be given by:

$$\mu = \mu^0 + \nu RT \ln a_\pm$$

Thus $a_\pm = \gamma_\pm m_\pm$ and $a_2 = (\gamma_\pm m_\pm)^\nu$ where $m_\pm$ and $\gamma_\pm$ denote, respectively, the mean molality and mean activity coefficient of the electrolyte. The mean activity coefficient of the electrolyte is given by:

$$\gamma_\pm = (\gamma_+^{\nu_+}\gamma_-^{\nu_-})^{1/\nu}$$

and the mean ionic concentration (in molality, for example) by:

$$m_\pm = (\nu_+^{\nu_+}\nu_-^{\nu_-})^{1/\nu} m = Xm$$

The properties of electrolytic solutions are, in general, directly related to the ionic strength of the solution, defined by:

$$I = 1/2 \sum_i z_i^2 m_i = Ym$$

where z is the ionic valence.

Values of Xm and Ym as well as $\gamma_\pm$ and a_2 are given in table 1 [2] for various valence types of electrolytes.

3. Theoretical Expressions for Activity Coefficients

Activity coefficients give a measure of the deviations of real solutions from ideality and include the magnitude of all effects that lead to these deviations.

[2] All tables are to be found at the end of the paper.

In dilute solutions the main effect is that of interionic attraction, i.e., the attraction between electrical (ionic) charges of unlike sign, and for which Debye and Hückel [3] assuming that ions are point charges derived a solution which led to the following expression for the mean activity coefficient, $\gamma_{\pm}$, of an electrolyte (γ shall be used hereafter for $\gamma_{\pm}$):

$$\log \gamma_c = -z_+ z_- A_c \sqrt{I_c} \qquad (1)$$

where the subscript c refers to concentrations on the volume basis and

$$A_c = \left(\frac{2\pi N}{1000}\right)^{1/2} \frac{e^3}{2.302585 k^{3/2}} \left(\frac{1}{T^{3/2}\epsilon^{3/2}}\right) = \frac{1.824829238 \times 10^6}{(T\epsilon)^{3/2}},$$

where the symbols have the following meanings and numerical values [4]:

N (or N_A) = Avogadro constant = $6.02252(28) \times 10^{23}$ mol^{-1}.
e = elementary charge (sometimes called the electronic or protonic charge) = 4.80298(20) esu.
k = Boltzmann constant = $1.38054(18) \times 10^{-16}$ erg K^{-1}.
T = absolute temperature in K (defined in the thermodynamic scale by assigning 273.16 K (Kelvin) to the triple point of water (freezing point of water, 273.15 K = 0 °C (Celsius). (The 13th General Conference on Weights and Measures in 1967 changed the unit of temperature and temperature interval from "degrees Kelvin" to simply "Kelvin," symbol: K.)
ϵ = dielectric constant of the solvent.

The values given in parentheses above represent established limits of error based on three standard deviations applied to the last digits in the listed value.

The following values of π and ln 10 were used in the calculations:

$$\pi = 3.14159265$$

$$\ln 10 = 2.302585$$

A_m on the molality (or weight) basis is given by $A_m = A_c(d_0)^{1/2}$ where d_0 is the density of the solvent. Values of ϵ, the dielectric constant, and of d_0, the density of water, from 0 to 100 °C, inclusive, are given in table 2 [5, 6]. Values of A_c and A_m for aqueous solutions from 0 to 100 °C, inclusive, are given in table 3.

Values of γ_c as calculated by equation (1) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 4 to 12, inclusive, for ionic strengths of 0.1 and below and for temperatures from 0 to 100 °C, inclusive. Similar data for γ_m are given in tables 13 to 21, inclusive.

When the size, a_i, of the ions is taken into account, the Debye-Hückel equation becomes:

$$\log \gamma_c = \frac{-z_+ z_- A_c \sqrt{I_c}}{1 + B_c a_i \sqrt{I_c}}$$

where

$$B_c = \left(\frac{8\pi N}{1000}\right)^{1/2} \frac{e}{k^{1/2}} \left(\frac{1}{T^{1/2}\epsilon^{1/2}}\right) = \frac{50.29158649 \times 10^8}{(T\epsilon)^{1/2}}$$

in which the symbols have the significances given above. B_m on the molality (or weight) basis is given by $B_m = B_c(d_0)^{1/2}$. Values of B_c and B_m for aqueous solutions from 0 to 100 °C, inclusive, are given in table 3.

Güntelberg [7] suggested the simpler form

$$\log \gamma_c = \frac{-z_+ z_- A_c \sqrt{I_c}}{1 + \sqrt{I_c}} \qquad (2)$$

which is equivalent to assigning a value of approximately 3Å as calculated by equation (2) to the ion size at all temperatures. Güntelberg values of γ_c for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 22 to 30, inclusive, for ionic strengths of 0.1 and below and for temperatures from 0 to 100 °C, inclusive. Güntelberg values for γ_m for these same valence types and ranges of ionic strength and temperature are given in tables 31 to 39, inclusive.

A modified or extended Güntelberg equation would be

$$\log \gamma_c = \frac{-z_+ z_- A_c \sqrt{I_c}}{1 + 3B_c \sqrt{I_c}} \qquad (3)$$

where the denominator is now temperature dependent since B_c is a function of temperature. Extended Güntelberg values of γ_c as calculated by equation (3) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 40 to 48, inclusive, for ionic strengths of 0.1 and below and for temperatures from 0 to 100 °C, inclusive. Extended Güntelberg values for γ_m for the same valence types and ranges of ionic strength and temperature are given in tables 49 to 57, inclusive.

These Güntelberg expressions for the activity coefficient give a fair representation of a number of electrolytes up to $I = 0.1$. However, a better representation is obtained if a term linear in the ionic strength is added to the right side of the equations. Thus, Guggenheim [8] proposed the equation

$$\log \gamma_c = \frac{-z_+ z_- A_c \sqrt{I_c}}{1 + \sqrt{I_c}} + bI_c$$

where b is an adjustable parameter.

Davies [9] altered the Guggenheim equation by putting $b=0.2Az_+z_-$, thus:

$$\log \gamma_c=\frac{-z_+z_-A_c\sqrt{I_c}}{1+\sqrt{I_c}}+0.2Az_+z_-I_c \qquad (4)$$

where the denominator of the first term on the right is again independent of temperature. Davies values of γ_c as calculated by equation (4) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 58 to 66, inclusive, for ionic strengths of 0.1 and below and for temperatures from 0 to 100 °C, inclusive. Davies values for γ_m for the same valence types and ranges of ionic strength and temperature are given in tables 67 to 75, inclusive.

Scatchard [10] suggested that a better average fit is obtained if $(1+1.5\sqrt{I})$ is used in the denominator of the first term on the right for the expression for log γ_c, thus:

$$\log \gamma_c=\frac{-z_+z_-A_c\sqrt{I_c}}{1+1.5\sqrt{I_c}} \qquad (5)$$

Scatchard actually used an additional linear term in I with an adjustable coefficient on the right side of the above equation but this additional term is omitted here. Scatchard values of γ_c as calculated by equation (5) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 76 to 84, inclusive, for ionic strengths of 0.1 and below and for temperatures of 0 to 100 °C, inclusive. Scatchard values for γ_m for the same valence types and ranges of ionic strength and temperature are given in tables 85 to 93, inclusive.

A modified or extended Scatchard equation results if the denominator, $1+1.5\sqrt{I_c}$, in the above equation is made temperature dependent, thus:

$$\log \gamma_c=\frac{-z_+z_-A_c\sqrt{I_c}}{1+4.5B_c\sqrt{I_c}} \qquad (6)$$

Extended Scatchard values for γ_c as calculated by equation (6) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3–2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively, in tables 94 to 102, inclusive, for ionic strengths of 0.1 and below and for temperatures from 0 to 100 °C, inclusive. Extended Scatchard values for γ_m for the same valence types and ranges of ionic strength and temperature are given in tables 103 to 111, inclusive.

Bjerrum [11] has shown that ion pairs (associated ions with charges of unlike sign) occur if the diameter of the ion is less than

$$a_B=\frac{z_+z_-e^2}{2\epsilon kT}$$

Values of a_B for aqueous solutions from 0 to 100 °C, inclusive, are given in table 112. The Bjerrum expression for the activity coefficient is:

$$\log \gamma_c=\frac{-z_+z_-A_c\sqrt{I_c}}{1+B_ca_B\sqrt{I_c}} \qquad (7)$$

Bjerrum values of γ_c as calculated by equation (7) for 1–1, 1–2 (or 2–1), 1–3 (or 3–1), 1–4 (or 4–1 or 2–2), 2–3 (or 3 – 2), 2–4 (or 4–2), 3–3, 3–4 (or 4–3), and 4–4 electrolytes are given, respectively in tables 113 to 121, inclusive, for ionic strengths of 0.1 and below and for temperatures of 0 to 100 °C, inclusive. Bjerrum values for γ_m for the same valence types and ranges of ionic strength and temperature are given in tables 122 to 130, inclusive.

4. Uncertainties

The uncertainties in values of the activity coefficients of electrolytes of various valence types for an ionic strength of 0.1 arising from the established limits of error for the physical constants employed in the above theoretical relations for the activity coefficients are given in table 131 for temperatures of 0, 25, 50, 75, and 100 °C. Uncertainties at intermediate temperatures may be obtained by interpolation. Uncertainties for more dilute solutions may be obtained by interpolation of the uncertainties on a linear plot of the uncertainties versus $\sqrt{I}$ between 0 (where the uncertainties are zero) and $\sqrt{0.1}$. In determining these uncertainties, the limits of error for the dielectric constant of water were taken to be zero.

Owen, Miller, Milner, and Cogan [12] in 1961, and Vidulich and Kay [13] in 1962 reported values for the dielectric constant of water from 0 to 70 °C and 0 to 40 °C, respectively. The values of Owen et al. differed from those of Malmberg and Maryott, used herein, by +0.18 percent, +0.08 percent, 0 percent, −0.16 percent, and −0.25 percent at 0, 25, 40, 70, and 100 °C. (Owen et al. values were calculated from their equation expressing the dielectric constant as a function of temperature), respectively, whereas those of Vidulich and Kay differed from those of Malmberg and Maryott by +0.17 percent, +0.08 percent, and +0.03 percent at 0, 25, and 40 °C, respectively. In table 132, values of the Debye-Hückel constants A_c, A_m, B_c, and B_m based on the dielectric constant of water determined by Owen et al. are given for temperatures from 0 to 100 °C. In table 133, values for the Bjerrum minimum ion parameter, based on the dielectric constant of water as determined by Owen et al., are given for tempera-

tures from 0 to 100 °C. The required Bjerrum values needed to give a smooth difference, as a function of temperature, between those calculated using the dielectric constant of water, as determined by Malmberg and Maryott [5] or Owen et al. [12] are given in the parentheses.

The differences in values of the activity coefficients of electrolytes of various valence types for an ionic strength of 0.1 from those given in the main tables, if the dielectric constant of water determined by Owen et al. [12] is used instead of the values of Malmberg and Maryott [5], are given in table 134 on a volume basis and in table 135 on a weight basis for temperatures of 0, 25, 50, 75, and 100 °C. Differences at intermediate temperatures may be obtained by interpolation. Differences for more dilute solutions may be obtained by interpolation of the differences on a linear plot of the differences versus $\sqrt{I}$ between 0 and $\sqrt{0.1}$.

5. Other Theoretical Treatments

The theoretical equations considered here are all general and in principle apply to all completely dissociated electrolytes and differ only in the ionic valence or in the choice of a common ion-size parameter. Those treatments which require, a priori, a specific value for the ion-size parameter [11, 14–17], or hydration number [18, 19], or some physical model for the interaction of ions in order to obtain numerical results [20–28], cannot be treated in a general numerical way and obviously are not included here. Applications of these extended treatments rest with specific cases. The equations given here are especially valuable as aids in extrapolations.

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Tables of Theoretical Activity Coefficients For Ionic Strengths from 0 to 0.1 and Temperatures from 0 to 100 °C

TABLE 1.—*Relations between mean molality, mean activity coefficient, solute (or electrolyte) activity, and ionic strength for various valence types of electrolytes*

Type	Example	$m_{\pm}=Xm$	$\gamma_{\pm}$	$a_2=a_{\pm}^{\nu}$	$I=Ym$ $=1/2\sum_i z_i^2 m$
1–1	KCl.....	m	$(\gamma_+\gamma_-)^{1/2}$	$m^2\gamma_{\pm}^2$	m
1–2	Na_2SO_4.....	$4^{1/3}m$	$(\gamma_+^2\gamma_-)^{1/3}$	$4m^3\gamma_{\pm}^3$	$3m$
1–3	$K_3Fe(CN)_6$.....	$27^{1/4}m$	$(\gamma_+^3\gamma_-)^{1/4}$	$27m^4\gamma_{\pm}^4$	$6m$
1–4	$K_4Fe(CN)_6$.....	$256^{1/5}m$	$(\gamma_+^4\gamma_-)^{1/5}$	$256m^5\gamma_{\pm}^5$	$10m$
2–1	$BaCl_2$.....	$4^{1/3}m$	$(\gamma_+\gamma_-^2)^{1/3}$	$4m^3\gamma_{\pm}^3$	$3m$
2–2	$MgSO_4$.....	m	$(\gamma_+\gamma_-)^{1/2}$	$m^2\gamma_{\pm}^2$	$4m$
2–3	$Sn_3[Fe(CN)_6]_2$....	$108^{1/5}m$	$(\gamma_+^3\gamma_-^2)^{1/5}$	$108m^5\gamma_{\pm}^5$	$15m$
2–4	$Mg_2Fe(CN)_6$.....	$4^{1/3}m$	$(\gamma_+^2\gamma_-)^{1/3}$	$4m^3\gamma_{\pm}^3$	$12m$
3–1	$AlCl_3$.....	$27^{1/4}m$	$(\gamma_+\gamma_-^3)^{1/4}$	$27m^4\gamma_{\pm}^4$	$6m$
3–2	$Al_2(SO_4)_3$.....	$108^{1/5}m$	$(\gamma_+^2\gamma_-^3)^{1/5}$	$108m^5\gamma_{\pm}^5$	$15m$
3–3	$LaFe(CN)_6$.....	m	$(\gamma_+\gamma_-)^{1/2}$	$m^2\gamma_{\pm}^2$	$9m$
3–4	$Al_4[Fe(CN)_6]_3$....	$6912^{1/7}m$	$(\gamma_+^4\gamma_-^3)^{1/7}$	$6912m^7\gamma_{\pm}^7$	$42m$
4–1	$Th(NO_3)_4$.....	$256^{1/5}m$	$(\gamma_+\gamma_-^4)^{1/5}$	$256m^5\gamma_{\pm}^5$	$10m$
4–2	$Th(SO_4)_2$.....	$4^{1/3}m$	$(\gamma_+\gamma_-^2)^{1/3}$	$4m^3\gamma_{\pm}^3$	$12m$
4–3	$Th_3(PO_4)_4$.....	$6912^{1/7}m$	$(\gamma_+^3\gamma_-^4)^{1/7}$	$6912m^7\gamma_{\pm}^7$	$42m$
4–4	$SnFe(CN)_6$.....	m	$(\gamma_+\gamma_-)^{1/2}$	$m^2\gamma_{\pm}^2$	$16m$

TABLE 2. *Dielectric constant and density of water*

Temperature	Dielectric constant	Density	Temperature	Dielectric constant	Density
t	ϵ	d_0	t	ϵ	d_0
°C		g/ml	°C		g/ml
0	87.74	0.99987	50	69.91	0.98807
5	85.76	.99999	55	68.34	.98573
10	83.83	.99973	60	66.81	.98324
15	81.95	.99913	65	65.32	.98059
18	80.84	.99862	70	63.86	.97781
20	80.10	.99823	75	62.43	.97489
25	78.30	.99707	80	61.03	.97183
30	76.55	.99567	85	59.66	.96865
35	74.83	.99406	90	58.32	.96534
38	73.82	.99229	95	57.01	.96192
40	73.15	.99224	100	55.72	.95838
45	71.51	.99025			

TABLE 3. *Values of the Debye-Hückel constants for activity coefficients for aqueous solutions from 0 to 100 °C*

t °C	A		B	
	Weight basis	Volume basis	Weight basis	Volume basis
	$kg^{1/2}\ mol^{-1/2}$	$l^{1/2}\ mol^{-1/2}$	$kg^{1/2}\ 10^{8}\ cm\ mol^{-1/2}$	$l^{1/2}\ 10^{8}\ cm\ mol^{-1/2}$
0	0.4918	0.4918	0.3248	0.3249
5	.4953	.4953	.3256	.3256
10	.4989	.4990	.3264	.3264
15	.5027	.5029	.3271	.3273
18	.5050	.5054	.3276	.3278
20	.5067	.5072	.3279	.3282
25	.5108	.5116	.3287	.3292
30	.5151	.5162	.3294	.3301
35	.5196	.5212	.3302	.3312
38	.5224	.5242	.3307	.3318
40	.5243	.5263	.3310	.3323
45	.5292	.5318	.3318	.3334
50	.5342	.5374	.3326	.3346
55	.5395	.5434	.3334	.3358
60	.5449	.5495	.3343	.3371
65	.5505	.5559	.3351	.3384
70	.5563	.5625	.3359	.3397
75	.5623	.5695	.3368	.3411
80	.5685	.5767	.3377	.3426
85	.5750	.5843	.3386	.3440
90	.5817	.5921	.3395	.3456
95	.5886	.6001	.3405	.3471
100	.5959	.6087	.3414	.3488

TABLE 4. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9887	.9887	.9886	.9885	.9884	.9884	.9883	.9882	.9881	.9880	.9880	.9878
.0002	.9841	.9840	.9839	.9838	.9837	.9836	.9835	.9833	.9832	.9831	.9830	.9828
.0003	.9806	.9804	.9803	.9801	.9800	.9800	.9798	.9796	.9794	.9793	.9792	.9790
.0004	.9776	.9774	.9773	.9771	.9770	.9769	.9767	.9765	.9763	.9761	.9761	.9758
.0005	.9750	.9748	.9746	.9744	.9743	.9742	.9740	.9738	.9735	.9734	.9733	.9730
.0006	.9726	.9725	.9722	.9720	.9719	.9718	.9716	.9713	.9710	.9709	.9708	.9705
.0007	.9705	.9703	.9701	.9698	.9697	.9696	.9693	.9690	.9687	.9686	.9684	.9681
.0008	.9685	.9683	.9680	.9678	.9676	.9675	.9672	.9669	.9666	.9664	.9663	.9660
.0009	.9666	.9664	.9661	.9659	.9657	.9656	.9653	.9650	.9646	.9644	.9643	.9639
.0010	.9648	.9646	.9643	.9640	.9639	.9637	.9634	.9631	.9628	.9626	.9624	.9620
.0020	.9506	.9503	.9499	.9495	.9493	.9491	.9487	.9482	.9477	.9475	.9472	.9467
.0030	.9399	.9394	.9390	.9385	.9382	.9380	.9375	.9370	.9364	.9360	.9358	.9351
.0040	.9309	.9304	.9299	.9294	.9290	.9288	.9282	.9276	.9269	.9265	.9262	.9255
.0050	.9230	.9225	.9220	.9214	.9210	.9207	.9201	.9194	.9186	.9182	.9179	.9171
.0060	.9160	.9154	.9148	.9142	.9138	.9135	.9128	.9120	.9112	.9107	.9104	.9095
.0070	.9096	.9090	.9083	.9077	.9072	.9069	.9061	.9053	.9045	.9039	.9036	.9026
.0080	.9037	.9030	.9023	.9016	.9011	.9008	.9000	.8991	.8982	.8977	.8973	.8963
.0090	.8981	.8975	.8967	.8960	.8955	.8951	.8943	.8934	.8924	.8918	.8914	.8903
.0100	.8929	.8922	.8915	.8907	.8901	.8898	.8889	.8879	.8869	.8863	.8859	.8847
.0200	.8520	.8510	.8500	.8489	.8483	.8478	.8465	.8453	.8439	.8431	.8425	.8410
.0300	.8219	.8208	.8195	.8183	.8175	.8169	.8154	.8139	.8123	.8113	.8107	.8089
.0400	.7973	.7960	.7947	.7933	.7924	.7917	.7901	.7884	.7866	.7855	.7848	.7828
.0500	.7763	.7749	.7734	.7719	.7709	.7702	.7684	.7666	.7646	.7635	.7626	.7605
.0600	.7578	.7563	.7547	.7530	.7520	.7512	.7493	.7474	.7453	.7440	.7432	.7409
.0700	.7411	.7395	.7379	.7361	.7350	.7342	.7322	.7302	.7280	.7266	.7257	.7233
.0800	.7259	.7243	.7225	.7207	.7195	.7187	.7166	.7145	.7122	.7108	.7098	.7073
.0900	.7120	.7102	.7084	.7065	.7053	.7044	.7023	.7001	.6977	.6962	.6952	.6926
.1000	.6990	.6972	.6953	.6934	.6921	.6912	.6890	.6867	.6842	.6827	.6817	.6789

TABLE 4. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9877	.9876	.9874	.9873	.9871	.9870	.9868	.9866	.9865	.9863	.9861
.0002	.9827	.9825	.9823	.9821	.9818	.9816	.9814	.9812	.9809	.9806	.9804
.0003	.9788	.9786	.9783	.9781	.9778	.9775	.9773	.9770	.9767	.9764	.9760
.0004	.9756	.9753	.9750	.9747	.9744	.9741	.9738	.9735	.9731	.9727	.9724
.0005	.9727	.9724	.9721	.9718	.9715	.9711	.9707	.9704	.9700	.9696	.9691
.0006	.9701	.9698	.9695	.9691	.9688	.9684	.9680	.9676	.9672	.9667	.9663
.0007	.9678	.9674	.9671	.9667	.9663	.9659	.9655	.9650	.9646	.9641	.9636
.0008	.9656	.9652	.9648	.9644	.9640	.9636	.9631	.9627	.9622	.9617	.9611
.0009	.9636	.9632	.9628	.9623	.9619	.9614	.9609	.9604	.9599	.9594	.9588
.0010	.9616	.9612	.9608	.9603	.9599	.9594	.9589	.9583	.9578	.9572	.9566
.0020	.9462	.9456	.9450	.9444	.9437	.9430	.9423	.9416	.9409	.9401	.9392
.0030	.9345	.9338	.9330	.9323	.9315	.9307	.9298	.9290	.9280	.9271	.9261
.0040	.9247	.9239	.9231	.9222	.9213	.9204	.9194	.9184	.9174	.9163	.9152
.0050	.9162	.9153	.9144	.9135	.9125	.9114	.9104	.9093	.9081	.9069	.9056
.0060	.9086	.9076	.9066	.9056	.9045	.9034	.9023	.9010	.8998	.8985	.8971
.0070	.9016	.9006	.8996	.8984	.8973	.8961	.8948	.8935	.8922	.8908	.8893
.0080	.8952	.8941	.8930	.8918	.8906	.8893	.8880	.8866	.8852	.8837	.8822
.0090	.8892	.8881	.8869	.8857	.8844	.8830	.8816	.8802	.8787	.8771	.8755
.0100	.8836	.8824	.8812	.8799	.8785	.8771	.8756	.8741	.8725	.8709	.8692
.0200	.8395	.8378	.8362	.8344	.8326	.8307	.8288	.8267	.8246	.8225	.8202
.0300	.8071	.8052	.8032	.8012	.7990	.7968	.7945	.7921	.7897	.7872	.7845
.0400	.7808	.7786	.7764	.7741	.7718	.7693	.7668	.7641	.7613	.7585	.7555
.0500	.7583	.7559	.7536	.7511	.7486	.7459	.7431	.7402	.7372	.7342	.7310
.0600	.7385	.7360	.7335	.7309	.7281	.7253	.7223	.7192	.7161	.7129	.7094
.0700	.7208	.7182	.7155	.7127	.7099	.7068	.7038	.7005	.6972	.6938	.6902
.0800	.7047	.7019	.6992	.6963	.6933	.6901	.6869	.6835	.6800	.6765	.6727
.0900	.6899	.6870	.6841	.6811	.6780	.6748	.6714	.6679	.6643	.6606	.6567
.1000	.6762	.6732	.6702	.6671	.6639	.6606	.6571	.6535	.6498	.6460	.6420

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TABLE 5. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9776	.9774	.9773	.9771	.9770	.9769	.9767	.9765	.9763	.9761	.9761	.9758
.0002	.9685	.9683	.9680	.9678	.9676	.9675	.9672	.9669	.9666	.9664	.9663	.9660
.0003	.9615	.9613	.9610	.9607	.9605	.9604	.9600	.9597	.9593	.9590	.9589	.9585
.0004	.9557	.9554	.9551	.9547	.9545	.9544	.9540	.9536	.9531	.9529	.9527	.9522
.0005	.9506	.9503	.9499	.9495	.9493	.9491	.9487	.9482	.9477	.9475	.9472	.9467
.0006	.9460	.9457	.9453	.9449	.9446	.9444	.9439	.9434	.9429	.9426	.9424	.9418
.0007	.9418	.9414	.9410	.9406	.9403	.9401	.9396	.9390	.9385	.9381	.9379	.9373
.0008	.9379	.9375	.9371	.9366	.9363	.9361	.9355	.9350	.9344	.9340	.9337	.9331
.0009	.9343	.9339	.9334	.9329	.9326	.9323	.9318	.9312	.9305	.9301	.9299	.9292
.0010	.9309	.9304	.9299	.9294	.9290	.9288	.9282	.9276	.9269	.9265	.9262	.9255
.0020	.9037	.9030	.9023	.9016	.9011	.9008	.9000	.8991	.8982	.8977	.8973	.8963
.0030	.8833	.8826	.8817	.8809	.8803	.8799	.8789	.8779	.8768	.8761	.8757	.8745
.0040	.8665	.8657	.8647	.8637	.8631	.8627	.8616	.8604	.8592	.8584	.8579	.8565
.0050	.8520	.8510	.8500	.8489	.8483	.8478	.8465	.8453	.8439	.8431	.8425	.8410
.0060	.8391	.8380	.8369	.8358	.8350	.8345	.8332	.8318	.8303	.8295	.8288	.8272
.0070	.8274	.8263	.8251	.8239	.8231	.8225	.8211	.8196	.8181	.8171	.8165	.8147
.0080	.8166	.8155	.8142	.8129	.8121	.8115	.8100	.8085	.8068	.8058	.8051	.8033
.0090	.8067	.8054	.8041	.8028	.8019	.8012	.7997	.7981	.7964	.7953	.7946	.7927
.0100	.7973	.7960	.7947	.7933	.7924	.7917	.7901	.7884	.7866	.7855	.7848	.7828
.0200	.7259	.7243	.7225	.7207	.7195	.7187	.7166	.7145	.7122	.7108	.7098	.7073
.0300	.6755	.6736	.6716	.6696	.6682	.6673	.6649	.6625	.6599	.6583	.6572	.6543
.0400	.6357	.6337	.6315	.6293	.6278	.6268	.6243	.6216	.6188	.6170	.6159	.6127
.0500	.6026	.6005	.5982	.5958	.5943	.5932	.5905	.5877	.5847	.5829	.5816	.5783
.0600	.5742	.5719	.5696	.5671	.5655	.5643	.5615	.5586	.5555	.5536	.5523	.5489
.0700	.5492	.5469	.5444	.5419	.5402	.5390	.5362	.5332	.5299	.5280	.5266	.5231
.0800	.5270	.5246	.5221	.5194	.5177	.5165	.5136	.5105	.5072	.5052	.5038	.5002
.0900	.5069	.5045	.5019	.4992	.4975	.4962	.4932	.4901	.4867	.4847	.4833	.4796
.1000	.4886	.4861	.4835	.4808	.4790	.4778	.4747	.4715	.4681	.4661	.4647	.4610

TABLE 5. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9756	.9753	.9750	.9747	.9744	.9741	.9738	.9735	.9731	.9727	.9724
.0002	.9656	.9652	.9648	.9644	.9640	.9636	.9631	.9627	.9622	.9617	.9611
.0003	.9580	.9576	.9571	.9566	.9561	.9556	.9550	.9545	.9539	.9533	.9526
.0004	.9517	.9512	.9506	.9501	.9495	.9489	.9483	.9476	.9469	.9462	.9455
.0005	.9462	.9456	.9450	.9444	.9437	.9430	.9423	.9416	.9409	.9401	.9392
.0006	.9412	.9405	.9399	.9392	.9385	.9378	.9370	.9362	.9354	.9345	.9336
.0007	.9366	.9359	.9352	.9345	.9338	.9330	.9321	.9313	.9304	.9295	.9285
.0008	.9324	.9317	.9309	.9302	.9294	.9285	.9276	.9267	.9258	.9248	.9238
.0009	.9284	.9277	.9269	.9261	.9252	.9243	.9234	.9224	.9215	.9204	.9193
.0010	.9247	.9239	.9231	.9222	.9213	.9204	.9194	.9184	.9174	.9163	.9152
.0020	.8952	.8941	.8930	.8918	.8906	.8893	.8880	.8866	.8852	.8837	.8822
.0030	.8732	.8719	.8706	.8692	.8677	.8662	.8646	.8630	.8613	.8595	.8577
.0040	.8551	.8536	.8521	.8505	.8489	.8472	.8454	.8435	.8416	.8396	.8375
.0050	.8395	.8378	.8362	.8344	.8326	.8307	.8288	.8267	.8246	.8225	.8202
.0060	.8256	.8238	.8220	.8201	.8182	.8162	.8141	.8119	.8096	.8073	.8048
.0070	.8130	.8111	.8092	.8072	.8051	.8030	.8008	.7984	.7960	.7936	.7909
.0080	.8014	.7995	.7974	.7953	.7932	.7909	.7886	.7861	.7836	.7810	.7782
.0090	.7907	.7887	.7866	.7844	.7821	.7797	.7773	.7747	.7721	.7694	.7665
.0100	.7808	.7786	.7764	.7741	.7718	.7693	.7668	.7641	.7613	.7585	.7555
.0200	.7047	.7019	.6992	.6963	.6933	.6901	.6869	.6835	.6800	.6765	.6727
.0300	.6514	.6483	.6451	.6418	.6385	.6349	.6313	.6275	.6236	.6196	.6154
.0400	.6096	.6062	.6028	.5993	.5957	.5918	.5879	.5838	.5796	.5754	.5708
.0500	.5750	.5715	.5679	.5641	.5603	.5563	.5522	.5479	.5435	.5390	.5343
.0600	.5454	.5417	.5380	.5342	.5302	.5260	.5218	.5173	.5128	.5082	.5033
.0700	.5196	.5158	.5120	.5080	.5039	.4996	.4953	.4907	.4861	.4813	.4763
.0800	.4966	.4927	.4888	.4848	.4806	.4763	.4718	.4672	.4624	.4576	.4526
.0900	.4759	.4720	.4681	.4639	.4597	.4553	.4508	.4461	.4413	.4365	.4313
.1000	.4572	.4532	.4492	.4451	.4408	.4363	.4318	.4270	.4222	.4173	.4121

TABLE 6. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9666	.9664	.9661	.9659	.9657	.9656	.9653	.9650	.9646	.9644	.9643	.9639
.0002	.9531	.9528	.9524	.9521	.9518	.9517	.9512	.9508	.9504	.9501	.9499	.9494
.0003	.9429	.9425	.9420	.9416	.9413	.9411	.9406	.9401	.9395	.9392	.9390	.9384
.0004	.9343	.9339	.9334	.9329	.9326	.9323	.9318	.9312	.9305	.9301	.9299	.9292
.0005	.9268	.9263	.9258	.9253	.9249	.9246	.9240	.9234	.9226	.9222	.9219	.9211
.0006	.9202	.9196	.9190	.9184	.9180	.9178	.9171	.9164	.9156	.9151	.9148	.9139
.0007	.9140	.9135	.9128	.9122	.9118	.9115	.9107	.9100	.9091	.9086	.9083	.9074
.0008	.9084	.9078	.9071	.9064	.9060	.9057	.9049	.9041	.9032	.9027	.9023	.9013
.0009	.9031	.9024	.9018	.9010	.9006	.9002	.8994	.8985	.8976	.8971	.8967	.8956
.0010	.8981	.8975	.8967	.8960	.8955	.8951	.8943	.8934	.8924	.8918	.8914	.8903
.0020	.8590	.8581	.8571	.8561	.8554	.8550	.8538	.8526	.8513	.8505	.8499	.8485
.0030	.8302	.8291	.8280	.8267	.8260	.8254	.8240	.8226	.8210	.8201	.8194	.8177
.0040	.8067	.8054	.8041	.8028	.8019	.8012	.7997	.7981	.7964	.7953	.7946	.7927
.0050	.7865	.7851	.7837	.7822	.7812	.7806	.7789	.7771	.7752	.7741	.7733	.7712
.0060	.7686	.7672	.7657	.7641	.7631	.7623	.7605	.7587	.7566	.7554	.7546	.7524
.0070	.7526	.7511	.7495	.7478	.7467	.7459	.7440	.7421	.7399	.7386	.7377	.7354
.0080	.7380	.7364	.7347	.7329	.7318	.7310	.7290	.7269	.7247	.7233	.7224	.7200
.0090	.7245	.7228	.7211	.7192	.7181	.7172	.7151	.7130	.7107	.7093	.7083	.7057
.0100	.7120	.7102	.7084	.7065	.7053	.7044	.7023	.7001	.6977	.6962	.6952	.6926
.0200	.6185	.6164	.6142	.6118	.6103	.6093	.6067	.6039	.6010	.5992	.5980	.5948
.0300	.5552	.5529	.5504	.5479	.5462	.5451	.5422	.5392	.5360	.5341	.5328	.5293
.0400	.5069	.5045	.5019	.4992	.4975	.4962	.4932	.4901	.4867	.4847	.4833	.4796
.0500	.4678	.4653	.4627	.4599	.4581	.4568	.4537	.4505	.4471	.4450	.4436	.4398
.0600	.4351	.4325	.4298	.4270	.4252	.4239	.4208	.4175	.4140	.4119	.4104	.4066
.0700	.4070	.4045	.4017	.3989	.3971	.3958	.3926	.3893	.3858	.3836	.3822	.3784
.0800	.3826	.3799	.3772	.3743	.3725	.3712	.3680	.3647	.3612	.3591	.3576	.3538
.0900	.3609	.3583	.3555	.3527	.3509	.3496	.3464	.3431	.3396	.3375	.3360	.3322
.1000	.3415	.3389	.3362	.3334	.3315	.3302	.3271	.3238	.3203	.3182	.3167	.3130

TABLE 6. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9636	.9632	.9628	.9623	.9619	.9614	.9609	.9604	.9599	.9594	.9588
.0002	.9489	.9483	.9477	.9471	.9465	.9459	.9452	.9445	.9438	.9431	.9423
.0003	.9377	.9371	.9364	.9357	.9349	.9341	.9333	.9325	.9316	.9307	.9298
.0004	.9284	.9277	.9269	.9261	.9252	.9243	.9234	.9224	.9215	.9204	.9193
.0005	.9203	.9195	.9186	.9177	.9168	.9158	.9148	.9137	.9126	.9115	.9103
.0006	.9131	.9122	.9112	.9102	.9092	.9081	.9070	.9059	.9047	.9034	.9021
.0007	.9065	.9055	.9045	.9034	.9023	.9012	.9000	.8987	.8974	.8961	.8947
.0008	.9003	.8993	.8982	.8971	.8959	.8947	.8934	.8921	.8908	.8894	.8879
.0009	.8946	.8935	.8924	.8912	.8900	.8887	.8874	.8860	.8845	.8831	.8815
.0010	.8892	.8881	.8869	.8857	.8844	.8830	.8816	.8802	.8787	.8771	.8755
.0020	.8470	.8455	.8439	.8422	.8405	.8387	.8368	.8348	.8328	.8308	.8286
.0030	.8160	.8142	.8123	.8103	.8083	.8062	.8040	.8017	.7993	.7969	.7943
.0040	.7907	.7887	.7866	.7844	.7821	.7797	.7773	.7747	.7721	.7694	.7665
.0050	.7691	.7669	.7646	.7622	.7598	.7572	.7545	.7517	.7489	.7459	.7428
.0060	.7501	.7477	.7453	.7427	.7401	.7373	.7345	.7315	.7285	.7254	.7220
.0070	.7330	.7305	.7279	.7252	.7225	.7195	.7166	.7134	.7102	.7069	.7034
.0080	.7175	.7148	.7121	.7093	.7064	.7034	.7003	.6970	.6936	.6902	.6865
.0090	.7032	.7004	.6976	.6947	.6917	.6885	.6853	.6819	.6784	.6749	.6711
.0100	.6899	.6870	.6841	.6811	.6780	.6748	.6714	.6679	.6643	.6606	.6567
.0200	.5916	.5881	.5846	.5810	.5772	.5733	.5693	.5651	.5608	.5564	.5518
.0300	.5257	.5220	.5182	.5142	.5102	.5059	.5016	.4970	.4924	.4877	.4827
.0400	.4759	.4720	.4681	.4639	.4597	.4553	.4508	.4461	.4413	.4365	.4313
.0500	.4360	.4320	.4279	.4237	.4194	.4149	.4103	.4055	.4007	.3958	.3905
.0600	.4028	.3987	.3946	.3904	.3861	.3815	.3769	.3721	.3672	.3623	.3570
.0700	.3745	.3704	.3663	.3620	.3577	.3532	.3485	.3437	.3389	.3340	.3287
.0800	.3499	.3459	.3418	.3375	.3332	.3287	.3241	.3193	.3145	.3096	.3044
.0900	.3284	.3243	.3202	.3160	.3117	.3072	.3027	.2979	.2932	.2883	.2833
.1000	.3092	.3051	.3011	.2969	.2927	.2882	.2837	.2791	.2743	.2696	.2646

TABLE 7. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9557	.9554	.9551	.9547	.9545	.9544	.9540	.9536	.9531	.9529	.9527	.9522
.0002	.9379	.9375	.9371	.9366	.9363	.9361	.9355	.9350	.9344	.9340	.9337	.9331
.0003	.9245	.9240	.9235	.9229	.9225	.9223	.9216	.9210	.9202	.9198	.9195	.9187
.0004	.9134	.9128	.9122	.9115	.9111	.9108	.9101	.9093	.9085	.9080	.9076	.9067
.0005	.9037	.9030	.9023	.9016	.9011	.9008	.9000	.8991	.8982	.8977	.8973	.8963
.0006	.8950	.8943	.8935	.8927	.8922	.8919	.8910	.8901	.8891	.8885	.8880	.8869
.0007	.8871	.8863	.8855	.8847	.8841	.8837	.8828	.8818	.8807	.8801	.8796	.8785
.0008	.8797	.8789	.8781	.8772	.8766	.8762	.8752	.8742	.8730	.8724	.8719	.8706
.0009	.8729	.8721	.8712	.8703	.8697	.8692	.8682	.8671	.8659	.8652	.8647	.8633
.0010	.8665	.8657	.8647	.8637	.8631	.8627	.8616	.8604	.8592	.8584	.8579	.8565
.0020	.8166	.8155	.8142	.8129	.8121	.8115	.8100	.8085	.8068	.8058	.8051	.8033
.0030	.7803	.7789	.7775	.7759	.7749	.7742	.7725	.7707	.7688	.7676	.7668	.7647
.0040	.7509	.7494	.7478	.7461	.7450	.7442	.7423	.7403	.7382	.7369	.7360	.7336
.0050	.7259	.7243	.7225	.7207	.7195	.7187	.7166	.7145	.7122	.7108	.7098	.7073
.0060	.7041	.7023	.7005	.6985	.6973	.6964	.6942	.6919	.6895	.6880	.6870	.6843
.0070	.6846	.6827	.6808	.6787	.6774	.6765	.6742	.6718	.6692	.6677	.6666	.6638
.0080	.6669	.6650	.6629	.6608	.6595	.6585	.6561	.6536	.6509	.6493	.6482	.6453
.0090	.6507	.6487	.6466	.6444	.6430	.6420	.6395	.6370	.6342	.6325	.6314	.6283
.0100	.6357	.6337	.6315	.6293	.6278	.6268	.6243	.6216	.6188	.6170	.6159	.6127
.0200	.5270	.5246	.5221	.5194	.5177	.5165	.5136	.5105	.5072	.5052	.5038	.5002
.0300	.4563	.4538	.4511	.4483	.4465	.4452	.4421	.4389	.4354	.4333	.4319	.4281
.0400	.4042	.4016	.3988	.3960	.3942	.3929	.3897	.3864	.3829	.3808	.3793	.3755
.0500	.3632	.3606	.3578	.3550	.3531	.3518	.3487	.3454	.3418	.3397	.3383	.3345
.0600	.3297	.3271	.3244	.3216	.3198	.3185	.3153	.3121	.3086	.3065	.3050	.3013
.0700	.3017	.2991	.2964	.2936	.2918	.2906	.2875	.2843	.2808	.2788	.2773	.2737
.0800	.2777	.2752	.2725	.2698	.2680	.2668	.2637	.2606	.2572	.2552	.2538	.2502
.0900	.2569	.2545	.2519	.2492	.2475	.2462	.2433	.2402	.2369	.2349	.2336	.2301
.1000	.2387	.2363	.2338	.2311	.2295	.2283	.2254	.2224	.2191	.2172	.2159	.2125

TABLE 47 *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9517	.9512	.9506	.9501	.9495	.9489	.9483	.9476	.9469	.9462	.9455
.0002	.9324	.9317	.9309	.9302	.9294	.9285	.9276	.9267	.9258	.9248	.9238
.0003	.9178	.9170	.9161	.9151	.9142	.9132	.9121	.9110	.9099	.9087	.9075
.0004	.9057	.9047	.9037	.9027	.9016	.9004	.8992	.8980	.8967	.8953	.8939
.0005	.8952	.8941	.8930	.8918	.8906	.8893	.8880	.8866	.8852	.8837	.8822
.0006	.8858	.8846	.8834	.8821	.8808	.8794	.8780	.8765	.8750	.8734	.8717
.0007	.8773	.8760	.8747	.8733	.8719	.8704	.8689	.8673	.8656	.8640	.8621
.0008	.8694	.8680	.8666	.8652	.8637	.8621	.8605	.8588	.8571	.8553	.8534
.0009	.8620	.8606	.8591	.8576	.8561	.8544	.8527	.8509	.8491	.8472	.8452
.0010	.8551	.8536	.8521	.8505	.8489	.8472	.8454	.8435	.8416	.8396	.8375
.0020	.8014	.7995	.7974	.7953	.7932	.7909	.7886	.7861	.7836	.7810	.7782
.0030	.7625	.7602	.7579	.7555	.7529	.7503	.7476	.7447	.7418	.7388	.7356
.0040	.7312	.7287	.7261	.7234	.7206	.7177	.7147	.7115	.7083	.7050	.7015
.0050	.7047	.7019	.6992	.6963	.6933	.6901	.6869	.6835	.6800	.6765	.6727
.0060	.6815	.6786	.6757	.6726	.6694	.6661	.6627	.6591	.6555	.6517	.6477
.0070	.6609	.6579	.6548	.6516	.6483	.6448	.6412	.6375	.6336	.6297	.6256
.0080	.6423	.6391	.6359	.6326	.6291	.6255	.6218	.6180	.6140	.6100	.6057
.0090	.6253	.6220	.6187	.6152	.6117	.6080	.6042	.6002	.5961	.5919	.5875
.0100	.6096	.6062	.6028	.5993	.5957	.5918	.5879	.5838	.5796	.5754	.5708
.0200	.4966	.4927	.4888	.4848	.4806	.4763	.4718	.4672	.4624	.4576	.4526
.0300	.4243	.4203	.4162	.4120	.4077	.4031	.3985	.3937	.3888	.3839	.3787
.0400	.3716	.3675	.3634	.3592	.3548	.3503	.3457	.3408	.3360	.3311	.3259
.0500	.3306	.3266	.3225	.3183	.3140	.3095	.3049	.3002	.2954	.2906	.2855
.0600	.2975	.2935	.2895	.2853	.2811	.2767	.2722	.2676	.2629	.2582	.2533
.0700	.2699	.2660	.2621	.2580	.2539	.2496	.2453	.2408	.2363	.2317	.2269
.0800	.2466	.2428	.2390	.2350	.2310	.2268	.2226	.2182	.2139	.2094	.2048
.0900	.2265	.2228	.2191	.2152	.2113	.2073	.2032	.1990	.1948	.1905	.1860
.1000	.2090	.2054	.2018	.1981	.1943	.1904	.1864	.1824	.1783	.1742	.1698

TABLE 8. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9343	.9339	.9334	.9329	.9326	.9323	.9318	.9312	.9305	.9301	.9299	.9292
.0002	.9084	.9078	.9071	.9064	.9060	.9057	.9049	.9041	.9032	.9027	.9023	.9013
.0003	.8890	.8882	.8874	.8866	.8861	.8857	.8848	.8838	.8827	.8821	.8817	.8805
.0004	.8729	.8721	.8712	.8703	.8697	.8692	.8682	.8671	.8659	.8652	.8647	.8633
.0005	.8590	.8581	.8571	.8561	.8554	.8550	.8538	.8526	.8513	.8505	.8499	.8485
.0006	.8467	.8457	.8446	.8435	.8428	.8423	.8410	.8397	.8383	.8374	.8369	.8353
.0007	.8355	.8344	.8333	.8321	.8313	.8308	.8294	.8280	.8265	.8256	.8250	.8233
.0008	.8252	.8240	.8228	.8216	.8208	.8202	.8188	.8173	.8157	.8148	.8141	.8124
.0009	.8156	.8144	.8132	.8119	.8110	.8104	.8089	.8074	.8057	.8047	.8040	.8022
.0010	.8067	.8054	.8041	.8028	.8019	.8012	.7997	.7981	.7964	.7953	.7946	.7927
.0020	.7380	.7364	.7347	.7329	.7318	.7310	.7290	.7269	.7247	.7233	.7224	.7200
.0030	.6893	.6874	.6855	.6835	.6822	.6813	.6790	.6766	.6741	.6726	.6715	.6687
.0040	.6507	.6487	.6466	.6444	.6430	.6420	.6395	.6370	.6342	.6325	.6314	.6283
.0050	.6185	.6164	.6142	.6118	.6103	.6093	.6067	.6039	.6010	.5992	.5980	.5948
.0060	.5908	.5886	.5863	.5838	.5823	.5811	.5784	.5756	.5725	.5707	.5694	.5660
.0070	.5664	.5641	.5617	.5592	.5576	.5564	.5536	.5506	.5475	.5456	.5443	.5408
.0080	.5446	.5422	.5398	.5372	.5355	.5343	.5314	.5284	.5252	.5232	.5219	.5183
.0090	.5249	.5225	.5200	.5173	.5156	.5144	.5114	.5084	.5050	.5031	.5017	.4981
.0100	.5069	.5045	.5019	.4992	.4975	.4962	.4932	.4901	.4867	.4847	.4833	.4796
.0200	.3826	.3799	.3772	.3743	.3725	.3712	.3680	.3647	.3612	.3591	.3576	.3538
.0300	.3083	.3057	.3030	.3002	.2984	.2971	.2940	.2908	.2873	.2853	.2838	.2801
.0400	.2569	.2545	.2519	.2492	.2475	.2462	.2433	.2402	.2369	.2349	.2336	.2301
.0500	.2189	.2165	.2141	.2115	.2099	.2087	.2059	.2030	.1999	.1980	.1967	.1934
.0600	.1893	.1871	.1848	.1823	.1808	.1797	.1771	.1743	.1714	.1697	.1685	.1654
.0700	.1657	.1636	.1614	.1591	.1577	.1566	.1541	.1516	.1488	.1472	.1461	.1432
.0800	.1463	.1444	.1423	.1401	.1388	.1378	.1355	.1330	.1305	.1289	.1279	.1252
.0900	.1302	.1284	.1264	.1244	.1231	.1222	.1200	.1177	.1153	.1139	.1129	.1103
.1000	.1166	.1149	.1130	.1111	.1099	.1091	.1070	.1049	.1026	.1013	.1003	.0979

TABLE 8. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9284	.9277	.9269	.9261	.9252	.9243	.9234	.9224	.9215	.9204	.9193
.0002	.9003	.8993	.8982	.8971	.8959	.8947	.8934	.8921	.8908	.8894	.8879
.0003	.8793	.8781	.8768	.8754	.8741	.8726	.8711	.8695	.8679	.8662	.8645
.0004	.8620	.8606	.8591	.8576	.8561	.8544	.8527	.8509	.8491	.8472	.8452
.0005	.8470	.8455	.8439	.8422	.8405	.8387	.8368	.8348	.8328	.8308	.8286
.0006	.8337	.8320	.8303	.8285	.8267	.8247	.8227	.8206	.8184	.8162	.8138
.0007	.8217	.8199	.8180	.8161	.8142	.8121	.8099	.8077	.8054	.8030	.8005
.0008	.8106	.8087	.8068	.8047	.8027	.8005	.7982	.7959	.7934	.7910	.7883
.0009	.8003	.7983	.7963	.7942	.7920	.7898	.7874	.7849	.7824	.7798	.7770
.0010	.7907	.7887	.7866	.7844	.7821	.7797	.7773	.7747	.7721	.7694	.7665
.0020	.7175	.7148	.7121	.7093	.7064	.7034	.7003	.6970	.6936	.6902	.6865
.0030	.6659	.6629	.6598	.6566	.6533	.6499	.6464	.6427	.6389	.6350	.6309
.0040	.6253	.6220	.6187	.6152	.6117	.6080	.6042	.6002	.5961	.5919	.5875
.0050	.5916	.5881	.5846	.5810	.5772	.5733	.5693	.5651	.5608	.5564	.5518
.0060	.5627	.5590	.5554	.5516	.5477	.5437	.5395	.5351	.5307	.5261	.5213
.0070	.5373	.5336	.5299	.5259	.5219	.5177	.5135	.5090	.5044	.4997	.4948
.0080	.5148	.5110	.5071	.5031	.4990	.4947	.4904	.4858	.4811	.4764	.4713
.0090	.4944	.4906	.4867	.4826	.4784	.4741	.4696	.4650	.4602	.4554	.4503
.0100	.4759	.4720	.4681	.4639	.4597	.4553	.4508	.4461	.4413	.4365	.4313
.0200	.3499	.3459	.3418	.3375	.3332	.3287	.3241	.3193	.3145	.3096	.3044
.0300	.2764	.2724	.2685	.2644	.2603	.2560	.2516	.2470	.2425	.2379	.2330
.0400	.2265	.2228	.2191	.2152	.2113	.2073	.2032	.1990	.1948	.1905	.1860
.0500	.1901	.1866	.1831	.1795	.1759	.1722	.1684	.1645	.1606	.1566	.1525
.0600	.1623	.1590	.1557	.1524	.1490	.1455	.1420	.1384	.1348	.1312	.1275
.0700	.1403	.1372	.1342	.1311	.1280	.1247	.1215	.1182	.1148	.1115	.1081
.0800	.1225	.1196	.1168	.1139	.1110	.1080	.1050	.1020	.0989	.0959	.0927
.0900	.1078	.1052	.1025	.0999	.0972	.0944	.0916	.0888	.0859	.0831	.0802
.1000	.0956	.0931	.0907	.0882	.0857	.0831	.0805	.0779	.0753	.0727	.0700

TABLE 9. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9134	.9128	.9122	.9115	.9111	.9108	.9101	.9093	.9085	.9080	.9076	.9067
.0002	.8797	.8789	.8781	.8772	.8766	.8762	.8752	.8742	.8730	.8724	.8719	.8706
.0003	.8548	.8538	.8528	.8518	.8511	.8506	.8494	.8482	.8468	.8460	.8454	.8439
.0004	.8343	.8332	.8321	.8309	.8301	.8296	.8282	.8268	.8253	.8244	.8237	.8221
.0005	.8166	.8155	.8142	.8129	.8121	.8115	.8100	.8085	.8068	.8058	.8051	.8033
.0006	.8010	.7997	.7984	.7970	.7961	.7954	.7939	.7922	.7904	.7894	.7886	.7867
.0007	.7869	.7855	.7841	.7826	.7817	.7810	.7793	.7776	.7757	.7745	.7738	.7717
.0008	.7740	.7725	.7711	.7695	.7685	.7678	.7660	.7642	.7622	.7610	.7602	.7580
.0009	.7620	.7606	.7590	.7574	.7563	.7556	.7537	.7518	.7497	.7485	.7476	.7454
.0010	.7509	.7494	.7478	.7461	.7450	.7442	.7423	.7403	.7382	.7369	.7360	.7336
.0020	.6669	.6650	.6629	.6608	.6595	.6585	.6561	.6536	.6509	.6493	.6482	.6453
.0030	.6088	.6067	.6044	.6021	.6005	.5995	.5968	.5940	.5910	.5893	.5880	.5848
.0040	.5639	.5616	.5591	.5566	.5550	.5538	.5510	.5481	.5449	.5430	.5416	.5382
.0050	.5270	.5246	.5221	.5194	.5177	.5165	.5136	.5105	.5072	.5052	.5038	.5002
.0060	.4957	.4933	.4907	.4879	.4862	.4850	.4819	.4788	.4754	.4733	.4719	.4682
.0070	.4686	.4661	.4635	.4607	.4589	.4576	.4545	.4513	.4479	.4458	.4444	.4406
.0080	.4447	.4422	.4395	.4367	.4349	.4336	.4305	.4272	.4237	.4216	.4202	.4164
.0090	.4234	.4208	.4181	.4153	.4135	.4122	.4090	.4057	.4022	.4001	.3986	.3948
.0100	.4042	.4016	.3988	.3960	.3942	.3929	.3897	.3864	.3829	.3808	.3793	.3755
.0200	.2777	.2752	.2725	.2698	.2680	.2668	.2637	.2606	.2572	.2552	.2538	.2502
.0300	.2082	.2059	.2035	.2010	.1994	.1982	.1955	.1926	.1896	.1878	.1865	.1833
.0400	.1634	.1613	.1591	.1568	.1554	.1543	.1519	.1493	.1466	.1450	.1439	.1410
.0500	.1319	.1300	.1280	.1260	.1247	.1238	.1216	.1193	.1169	.1154	.1144	.1119
.0600	.1087	.1070	.1052	.1034	.1022	.1014	.0994	.0974	.0952	.0939	.0930	.0908
.0700	.0910	.0895	.0879	.0862	.0852	.0844	.0826	.0808	.0789	.0777	.0769	.0749
.0800	.0771	.0757	.0743	.0728	.0718	.0712	.0696	.0679	.0662	.0651	.0644	.0626
.0900	.0660	.0648	.0634	.0621	.0612	.0606	.0592	.0577	.0561	.0552	.0546	.0529
.1000	.0570	.0558	.0547	.0534	.0527	.0521	.0508	.0494	.0480	.0472	.0466	.0451

TABLE 9. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9057	.9047	.9037	.9027	.9016	.9004	.8992	.8980	.8967	.8953	.8939
.0002	.8694	.8680	.8666	.8652	.8637	.8621	.8605	.8588	.8571	.8553	.8534
.0003	.8424	.8408	.8392	.8375	.8357	.8338	.8319	.8299	.8279	.8257	.8235
.0004	.8204	.8186	.8167	.8148	.8128	.8107	.8086	.8063	.8040	.8016	.7991
.0005	.8014	.7995	.7974	.7953	.7932	.7909	.7886	.7861	.7836	.7810	.7782
.0006	.7847	.7826	.7804	.7782	.7758	.7734	.7709	.7682	.7655	.7628	.7598
.0007	.7696	.7673	.7651	.7627	.7602	.7576	.7550	.7522	.7493	.7464	.7433
.0008	.7558	.7534	.7510	.7485	.7460	.7433	.7405	.7375	.7346	.7315	.7282
.0009	.7431	.7406	.7381	.7355	.7328	.7300	.7271	.7240	.7209	.7178	.7144
.0010	.7312	.7287	.7261	.7234	.7206	.7177	.7147	.7115	.7083	.7050	.7015
.0020	.6423	.6391	.6359	.6326	.6291	.6255	.6218	.6180	.6140	.6100	.6057
.0030	.5815	.5780	.5744	.5707	.5669	.5629	.5589	.5546	.5502	.5458	.5411
.0040	.5347	.5310	.5272	.5233	.5193	.5151	.5108	.5062	.5017	.4970	.4921
.0050	.4966	.4927	.4888	.4848	.4806	.4763	.4718	.4672	.4624	.4576	.4526
.0060	.4645	.4605	.4565	.4524	.4482	.4437	.4392	.4344	.4296	.4247	.4196
.0070	.4368	.4328	.4288	.4245	.4202	.4157	.4111	.4064	.4015	.3966	.3914
.0080	.4125	.4085	.4044	.4002	.3958	.3913	.3867	.3819	.3770	.3721	.3668
.0090	.3910	.3869	.3828	.3785	.3742	.3696	.3650	.3602	.3553	.3504	.3452
.0100	.3716	.3675	.3634	.3592	.3548	.3503	.3457	.3408	.3360	.3311	.3259
.0200	.2466	.2428	.2390	.2350	.2310	.2268	.2226	.2182	.2139	.2094	.2048
.0300	.1800	.1766	.1732	.1697	.1662	.1625	.1588	.1550	.1512	.1474	.1434
.0400	.1381	.1351	.1321	.1290	.1259	.1227	.1195	.1162	.1129	.1096	.1062
.0500	.1093	.1066	.1040	.1013	.0986	.0958	.0930	.0901	.0873	.0844	.0815
.0600	.0885	.0861	.0838	.0814	.0790	.0766	.0741	.0716	.0691	.0667	.0641
.0700	.0729	.0708	.0687	.0666	.0645	.0623	.0602	.0580	.0558	.0537	.0515
.0800	.0608	.0589	.0571	.0552	.0534	.0514	.0496	.0476	.0457	.0439	.0419
.0900	.0513	.0496	.0480	.0463	.0447	.0430	.0413	.0396	.0379	.0363	.0346
.1000	.0437	.0422	.0407	.0392	.0378	.0362	.0348	.0333	.0318	.0303	.0288

TABLE 10. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9031	.9024	.9018	.9010	.9006	.9002	.8994	.8985	.8976	.8971	.8967	.8956
.0002	.8658	.8649	.8639	.8630	.8623	.8619	.8608	.8596	.8583	.8576	.8571	.8557
.0003	.8382	.8371	.8360	.8348	.8341	.8336	.8322	.8309	.8294	.8285	.8279	.8262
.0004	.8156	.8144	.8132	.8119	.8110	.8104	.8089	.8074	.8057	.8047	.8040	.8022
.0005	.7962	.7949	.7936	.7921	.7912	.7905	.7889	.7873	.7854	.7843	.7836	.7816
.0006	.7791	.7777	.7762	.7747	.7737	.7730	.7713	.7695	.7675	.7664	.7656	.7634
.0007	.7636	.7622	.7606	.7590	.7580	.7572	.7554	.7535	.7514	.7502	.7493	.7471
.0008	.7496	.7480	.7464	.7447	.7436	.7428	.7409	.7389	.7368	.7355	.7346	.7322
.0009	.7366	.7350	.7333	.7315	.7304	.7296	.7276	.7255	.7232	.7219	.7209	.7185
.0010	.7245	.7228	.7211	.7192	.7181	.7172	.7151	.7130	.7107	.7093	.7083	.7057
.0020	.6339	.6319	.6297	.6275	.6260	.6250	.6224	.6198	.6169	.6152	.6140	.6109
.0030	.5722	.5700	.5676	.5651	.5635	.5623	.5595	.5566	.5534	.5516	.5503	.5468
.0040	.5249	.5225	.5200	.5173	.5156	.5144	.5114	.5084	.5050	.5031	.5017	.4981
.0050	.4864	.4839	.4813	.4786	.4768	.4756	.4725	.4693	.4659	.4639	.4624	.4587
.0060	.4541	.4516	.4489	.4461	.4443	.4430	.4399	.4367	.4332	.4311	.4296	.4259
.0070	.4263	.4237	.4210	.4181	.4163	.4150	.4119	.4086	.4051	.4030	.4015	.3977
.0080	.4019	.3993	.3966	.3937	.3919	.3906	.3874	.3841	.3806	.3785	.3770	.3732
.0090	.3803	.3777	.3749	.3721	.3702	.3689	.3658	.3625	.3589	.3568	.3553	.3515
.0100	.3609	.3583	.3555	.3527	.3509	.3496	.3464	.3431	.3396	.3375	.3360	.3322
.0200	.2366	.2342	.2317	.2290	.2274	.2262	.2233	.2203	.2171	.2152	.2139	.2104
.0300	.1711	.1690	.1668	.1645	.1630	.1619	.1594	.1568	.1540	.1524	.1512	.1483
.0400	.1302	.1284	.1264	.1244	.1231	.1222	.1200	.1177	.1153	.1139	.1129	.1103
.0500	.1024	.1007	.0990	.0973	.0961	.0953	.0934	.0914	.0894	.0881	.0873	.0851
.0600	.0824	.0809	.0794	.0779	.0769	.0762	.0745	.0728	.0710	.0699	.0691	.0672
.0700	.0674	.0662	.0648	.0635	.0626	.0620	.0605	.0590	.0574	.0565	.0558	.0542
.0800	.0560	.0548	.0537	.0525	.0517	.0512	.0499	.0485	.0471	.0463	.0457	.0443
.0900	.0470	.0460	.0449	.0439	.0432	.0427	.0416	.0404	.0392	.0384	.0379	.0367
.1000	.0398	.0389	.0380	.0370	.0364	.0360	.0350	.0340	.0329	.0322	.0318	.0307

TABLE 10. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8946	.8935	.8924	.8912	.8900	.8887	.8874	.8860	.8845	.8831	.8815
.0002	.8543	.8528	.8513	.8497	.8480	.8463	.8445	.8426	.8407	.8387	.8366
.0003	.8246	.8228	.8210	.8191	.8172	.8151	.8130	.8108	.8085	.8062	.8037
.0004	.8003	.7983	.7963	.7942	.7920	.7898	.7874	.7849	.7824	.7798	.7770
.0005	.7796	.7774	.7752	.7729	.7705	.7681	.7655	.7628	.7601	.7572	.7542
.0006	.7613	.7589	.7566	.7541	.7516	.7489	.7462	.7433	.7404	.7374	.7342
.0007	.7448	.7423	.7399	.7373	.7346	.7318	.7289	.7259	.7228	.7196	.7162
.0008	.7298	.7272	.7246	.7219	.7191	.7162	.7132	.7100	.7068	.7035	.6999
.0009	.7160	.7133	.7106	.7078	.7049	.7018	.6987	.6954	.6920	.6886	.6849
.0010	.7032	.7004	.6976	.6947	.6917	.6885	.6853	.6819	.6784	.6749	.6711
.0020	.6077	.6043	.6009	.5974	.5937	.5899	.5860	.5819	.5777	.5734	.5689
.0030	.5434	.5397	.5359	.5321	.5281	.5239	.5197	.5152	.5107	.5060	.5011
.0040	.4944	.4906	.4867	.4826	.4784	.4741	.4696	.4650	.4602	.4554	.4503
.0050	.4550	.4510	.4470	.4428	.4386	.4341	.4295	.4248	.4199	.4150	.4099
.0060	.4220	.4180	.4139	.4097	.4054	.4008	.3962	.3914	.3866	.3816	.3764
.0070	.3939	.3898	.3857	.3814	.3771	.3725	.3679	.3631	.3582	.3533	.3481
.0080	.3693	.3652	.3611	.3569	.3525	.3480	.3434	.3386	.3337	.3288	.3236
.0090	.3477	.3436	.3395	.3352	.3309	.3264	.3218	.3170	.3122	.3073	.3022
.0100	.3284	.3243	.3202	.3160	.3117	.3072	.3027	.2979	.2932	.2883	.2833
.0200	.2070	.2034	.1998	.1961	.1923	.1884	.1845	.1804	.1764	.1723	.1680
.0300	.1453	.1422	.1391	.1360	.1328	.1295	.1262	.1228	.1194	.1160	.1125
.0400	.1078	.1052	.1025	.0999	.0972	.0944	.0916	.0888	.0859	.0831	.0802
.0500	.0829	.0806	.0784	.0761	.0738	.0714	.0691	.0667	.0643	.0620	.0596
.0600	.0654	.0634	.0615	.0595	.0575	.0555	.0535	.0515	.0495	.0475	.0455
.0700	.0525	.0508	.0492	.0475	.0458	.0440	.0423	.0406	.0389	.0372	.0355
.0800	.0429	.0414	.0399	.0385	.0370	.0355	.0340	.0326	.0311	.0297	.0282
.0900	.0354	.0341	.0328	.0316	.0303	.0290	.0277	.0264	.0252	.0240	.0227
.1000	.0295	.0284	.0273	.0262	.0251	.0239	.0228	.0217	.0206	.0196	.0185

TABLE 11. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8729	.8721	.8712	.8703	.8697	.8692	.8682	.8671	.8659	.8652	.8647	.8633
.0002	.8252	.8240	.8228	.8216	.8208	.8202	.8188	.8173	.8157	.8148	.8141	.8124
.0003	.7903	.7890	.7876	.7861	.7852	.7845	.7828	.7811	.7792	.7781	.7773	.7753
.0004	.7620	.7606	.7590	.7574	.7563	.7556	.7537	.7518	.7497	.7485	.7476	.7454
.0005	.7380	.7364	.7347	.7329	.7318	.7310	.7290	.7269	.7247	.7233	.7224	.7200
.0006	.7169	.7152	.7134	.7115	.7103	.7094	.7073	.7051	.7027	.7013	.7003	.6977
.0007	.6980	.6962	.6943	.6924	.6911	.6902	.6880	.6857	.6832	.6817	.6806	.6779
.0008	.6809	.6790	.6771	.6750	.6737	.6727	.6704	.6680	.6654	.6639	.6628	.6599
.0009	.6652	.6633	.6612	.6591	.6577	.6568	.6544	.6519	.6492	.6476	.6464	.6435
.0010	.6507	.6487	.6466	.6444	.6430	.6420	.6395	.6370	.6342	.6325	.6314	.6283
.0020	.5446	.5422	.5398	.5372	.5355	.5343	.5314	.5284	.5252	.5232	.5219	.5183
.0030	.4751	.4726	.4699	.4672	.4654	.4641	.4610	.4578	.4544	.4523	.4509	.4472
.0040	.4234	.4208	.4181	.4153	.4135	.4122	.4090	.4057	.4022	.4001	.3986	.3948
.0050	.3826	.3799	.3772	.3743	.3725	.3712	.3680	.3647	.3612	.3591	.3576	.3538
.0060	.3490	.3464	.3437	.3408	.3390	.3377	.3345	.3313	.3277	.3256	.3242	.3204
.0070	.3208	.3182	.3155	.3127	.3109	.3096	.3064	.3032	.2997	.2977	.2962	.2925
.0080	.2966	.2940	.2914	.2886	.2868	.2855	.2824	.2792	.2758	.2738	.2723	.2687
.0090	.2755	.2730	.2704	.2676	.2659	.2646	.2616	.2584	.2551	.2531	.2517	.2481
.0100	.2569	.2545	.2519	.2492	.2475	.2462	.2433	.2402	.2369	.2349	.2336	.2301
.0200	.1463	.1444	.1423	.1401	.1388	.1378	.1355	.1330	.1305	.1289	.1279	.1252
.0300	.0950	.0934	.0918	.0901	.0890	.0883	.0864	.0845	.0825	.0814	.0806	.0785
.0400	.0660	.0648	.0634	.0621	.0612	.0606	.0592	.0577	.0561	.0552	.0546	.0529
.0500	.0479	.0469	.0458	.0447	.0440	.0436	.0424	.0412	.0399	.0392	.0387	.0374
.0600	.0358	.0350	.0341	.0332	.0327	.0323	.0313	.0304	.0294	.0288	.0284	.0273
.0700	.0275	.0268	.0260	.0253	.0249	.0245	.0238	.0230	.0221	.0217	.0213	.0205
.0800	.0214	.0208	.0202	.0196	.0193	.0190	.0183	.0177	.0170	.0166	.0164	.0157
.0900	.0170	.0165	.0160	.0155	.0152	.0149	.0144	.0139	.0133	.0130	.0127	.0122
.1000	.0136	.0132	.0128	.0123	.0121	.0119	.0114	.0110	.0105	.0103	.0101	.0096

TABLE 11. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8620	.8606	.8591	.8576	.8561	.8544	.8527	.8509	.8491	.8472	.8452
.0002	.8106	.8087	.8068	.8047	.8027	.8005	.7982	.7959	.7934	.7910	.7883
.0003	.7732	.7710	.7688	.7664	.7640	.7614	.7588	.7561	.7532	.7504	.7473
.0004	.7431	.7406	.7381	.7355	.7328	.7300	.7271	.7240	.7209	.7178	.7144
.0005	.7175	.7148	.7121	.7093	.7064	.7034	.7003	.6970	.6936	.6902	.6865
.0006	.6951	.6923	.6894	.6864	.6834	.6801	.6768	.6734	.6698	.6662	.6623
.0007	.6751	.6722	.6692	.6661	.6628	.6595	.6560	.6524	.6487	.6449	.6408
.0008	.6571	.6540	.6509	.6476	.6443	.6408	.6372	.6334	.6296	.6256	.6214
.0009	.6405	.6373	.6341	.6308	.6273	.6237	.6200	.6161	.6121	.6081	.6038
.0010	.6253	.6220	.6187	.6152	.6117	.6080	.6042	.6002	.5961	.5919	.5875
.0020	.5148	.5110	.5071	.5031	.4990	.4947	.4904	.4858	.4811	.4764	.4713
.0030	.4434	.4394	.4353	.4311	.4269	.4224	.4178	.4130	.4082	.4032	.3980
.0040	.3910	.3869	.3828	.3785	.3742	.3696	.3650	.3602	.3553	.3504	.3452
.0050	.3499	.3459	.3418	.3375	.3332	.3287	.3241	.3193	.3145	.3096	.3044
.0060	.3166	.3125	.3085	.3043	.3000	.2956	.2910	.2863	.2816	.2768	.2718
.0070	.2887	.2847	.2807	.2766	.2724	.2681	.2636	.2590	.2544	.2497	.2448
.0080	.2650	.2611	.2572	.2531	.2490	.2448	.2404	.2360	.2315	.2269	.2222
.0090	.2445	.2406	.2368	.2329	.2289	.2247	.2205	.2162	.2118	.2074	.2028
.0100	.2265	.2228	.2191	.2152	.2113	.2073	.2032	.1990	.1948	.1905	.1860
.0200	.1225	.1196	.1168	.1139	.1110	.1080	.1050	.1020	.0989	.0959	.0927
.0300	.0764	.0742	.0721	.0699	.0677	.0655	.0633	.0610	.0588	.0566	.0543
.0400	.0513	.0496	.0480	.0463	.0447	.0430	.0413	.0396	.0379	.0363	.0346
.0500	.0361	.0348	.0335	.0322	.0309	.0296	.0283	.0270	.0258	.0245	.0233
.0600	.0263	.0253	.0243	.0232	.0222	.0212	.0202	.0192	.0182	.0172	.0162
.0700	.0197	.0188	.0180	.0172	.0164	.0156	.0148	.0140	.0132	.0124	.0117
.0800	.0150	.0143	.0136	.0130	.0123	.0117	.0110	.0104	.0098	.0092	.0086
.0900	.0116	.0111	.0105	.0100	.0094	.0089	.0084	.0079	.0074	.0069	.0064
.1000	.0091	.0087	.0082	.0078	.0073	.0069	.0065	.0061	.0057	.0053	.0049

TABLE 12. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8343	.8332	.8321	.8309	.8301	.8296	.8282	.8268	.8253	.8244	.8237	.8221
.0002	.7740	.7725	.7711	.7695	.7685	.7678	.7660	.7642	.7622	.7610	.7602	.7580
.0003	.7306	.7290	.7273	.7255	.7243	.7235	.7215	.7194	.7171	.7157	.7147	.7122
.0004	.6960	.6942	.6923	.6904	.6891	.6882	.6859	.6836	.6811	.6796	.6786	.6758
.0005	.6669	.6650	.6629	.6608	.6595	.6585	.6561	.6536	.6509	.6493	.6482	.6453
.0006	.6416	.6396	.6374	.6352	.6338	.6327	.6302	.6276	.6248	.6231	.6219	.6188
.0007	.6192	.6171	.6148	.6125	.6110	.6099	.6073	.6046	.6017	.5999	.5987	.5955
.0008	.5990	.5968	.5945	.5921	.5906	.5895	.5868	.5840	.5809	.5791	.5779	.5746
.0009	.5807	.5784	.5761	.5736	.5720	.5709	.5681	.5652	.5621	.5603	.5590	.5556
.0010	.5639	.5616	.5591	.5566	.5550	.5538	.5510	.5481	.5449	.5430	.5416	.5382
.0020	.4447	.4422	.4395	.4367	.4349	.4336	.4305	.4272	.4237	.4216	.4202	.4164
.0030	.3707	.3681	.3653	.3625	.3607	.3593	.3562	.3529	.3493	.3472	.3458	.3419
.0040	.3179	.3153	.3126	.3098	.3080	.3067	.3036	.3004	.2969	.2948	.2934	.2896
.0050	.2777	.2752	.2725	.2698	.2680	.2668	.2637	.2606	.2572	.2552	.2538	.2502
.0060	.2457	.2433	.2407	.2381	.2364	.2352	.2322	.2292	.2260	.2240	.2227	.2192
.0070	.2196	.2173	.2148	.2122	.2106	.2094	.2066	.2037	.2006	.1987	.1975	.1941
.0080	.1978	.1955	.1931	.1907	.1891	.1880	.1853	.1825	.1795	.1778	.1765	.1734
.0090	.1793	.1771	.1748	.1724	.1709	.1699	.1673	.1646	.1618	.1601	.1589	.1559
.0100	.1634	.1613	.1591	.1568	.1554	.1543	.1519	.1493	.1466	.1450	.1439	.1410
.0200	.0771	.0757	.0743	.0728	.0718	.0712	.0696	.0679	.0662	.0651	.0644	.0626
.0300	.0434	.0424	.0414	.0404	.0398	.0393	.0382	.0371	.0359	.0353	.0348	.0336
.0400	.0267	.0260	.0253	.0246	.0241	.0238	.0231	.0223	.0215	.0210	.0207	.0199
.0500	.0174	.0169	.0164	.0159	.0156	.0153	.0148	.0142	.0137	.0133	.0131	.0125
.0600	.0118	.0115	.0111	.0107	.0105	.0103	.0099	.0095	.0091	.0088	.0087	.0082
.0700	.0083	.0080	.0077	.0074	.0073	.0071	.0068	.0065	.0062	.0060	.0059	.0056
.0800	.0059	.0057	.0055	.0053	.0052	.0051	.0048	.0046	.0044	.0042	.0042	.0039
.0900	.0044	.0042	.0040	.0039	.0038	.0037	.0035	.0033	.0031	.0030	.0030	.0028
.1000	.0032	.0031	.0030	.0029	.0028	.0027	.0026	.0024	.0023	.0022	.0022	.0020

TABLE 12. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8204	.8186	.8167	.8148	.8128	.8107	.8086	.8063	.8040	.8016	.7991
.0002	.7558	.7534	.7510	.7485	.7460	.7433	.7405	.7375	.7346	.7315	.7282
.0003	.7097	.7070	.7042	.7014	.6984	.6953	.6921	.6888	.6854	.6819	.6781
.0004	.6730	.6701	.6671	.6639	.6607	.6573	.6538	.6502	.6464	.6426	.6386
.0005	.6423	.6391	.6359	.6326	.6291	.6255	.6218	.6180	.6140	.6100	.6057
.0006	.6157	.6124	.6090	.6055	.6019	.5981	.5943	.5902	.5861	.5818	.5774
.0007	.5923	.5888	.5853	.5817	.5779	.5740	.5700	.5658	.5615	.5571	.5525
.0008	.5712	.5677	.5641	.5603	.5565	.5524	.5483	.5440	.5396	.5351	.5303
.0009	.5521	.5485	.5448	.5410	.5370	.5329	.5287	.5242	.5197	.5152	.5103
.0010	.5347	.5310	.5272	.5233	.5193	.5151	.5108	.5062	.5017	.4970	.4921
.0020	.4125	.4085	.4044	.4002	.3958	.3913	.3867	.3819	.3770	.3721	.3668
.0030	.3381	.3340	.3299	.3257	.3214	.3169	.3123	.3076	.3028	.2979	.2928
.0040	.2859	.2819	.2779	.2738	.2696	.2653	.2609	.2563	.2517	.2470	.2421
.0050	.2466	.2428	.2390	.2350	.2310	.2268	.2226	.2182	.2139	.2094	.2048
.0060	.2158	.2121	.2084	.2047	.2008	.1969	.1929	.1887	.1846	.1804	.1760
.0070	.1908	.1873	.1838	.1802	.1766	.1728	.1690	.1651	.1612	.1573	.1532
.0080	.1702	.1669	.1635	.1601	.1567	.1531	.1495	.1458	.1421	.1384	.1346
.0090	.1529	.1497	.1465	.1433	.1400	.1366	.1332	.1297	.1263	.1228	.1191
.0100	.1381	.1351	.1321	.1290	.1259	.1227	.1195	.1162	.1129	.1096	.1062
.0200	.0608	.0589	.0571	.0552	.0534	.0514	.0496	.0476	.0457	.0439	.0419
.0300	.0324	.0312	.0300	.0288	.0276	.0264	.0252	.0240	.0229	.0217	.0206
.0400	.0191	.0182	.0174	.0166	.0158	.0151	.0143	.0135	.0127	.0120	.0113
.0500	.0119	.0114	.0108	.0103	.0097	.0092	.0086	.0081	.0076	.0071	.0066
.0600	.0078	.0074	.0070	.0066	.0062	.0059	.0055	.0051	.0048	.0044	.0041
.0700	.0053	.0050	.0047	.0044	.0042	.0039	.0036	.0034	.0031	.0029	.0027
.0800	.0037	.0035	.0033	.0030	.0028	.0026	.0025	.0023	.0021	.0019	.0018
.0900	.0026	.0025	.0023	.0021	.0020	.0018	.0017	.0016	.0014	.0013	.0012
.1000	.0019	.0018	.0017	.0015	.0014	.0013	.0012	.0011	.0010	.0009	.0008

TABLE 13. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9887	.9887	.9886	.9885	.9884	.9884	.9883	.9882	.9881	.9880	.9880	.9879
.0002	.9841	.9840	.9839	.9838	.9837	.9836	.9835	.9834	.9832	.9831	.9831	.9829
.0003	.9806	.9804	.9803	.9802	.9801	.9800	.9798	.9797	.9795	.9794	.9793	.9791
.0004	.9776	.9774	.9773	.9771	.9770	.9769	.9768	.9766	.9764	.9762	.9761	.9759
.0005	.9750	.9748	.9746	.9744	.9743	.9742	.9740	.9738	.9736	.9735	.9734	.9731
.0006	.9726	.9725	.9723	.9720	.9719	.9718	.9716	.9714	.9711	.9710	.9709	.9706
.0007	.9705	.9703	.9701	.9698	.9697	.9696	.9694	.9691	.9688	.9687	.9686	.9683
.0008	.9685	.9683	.9680	.9678	.9676	.9675	.9673	.9670	.9667	.9665	.9664	.9661
.0009	.9666	.9664	.9661	.9659	.9657	.9656	.9653	.9650	.9647	.9646	.9644	.9641
.0010	.9648	.9646	.9643	.9641	.9639	.9638	.9635	.9632	.9629	.9627	.9625	.9622
.0020	.9506	.9503	.9499	.9496	.9493	.9492	.9488	.9483	.9479	.9476	.9474	.9470
.0030	.9399	.9394	.9390	.9386	.9383	.9381	.9376	.9371	.9366	.9362	.9360	.9354
.0040	.9309	.9304	.9299	.9294	.9291	.9289	.9283	.9277	.9271	.9267	.9265	.9258
.0050	.9230	.9225	.9220	.9214	.9211	.9208	.9202	.9196	.9189	.9185	.9182	.9174
.0060	.9160	.9154	.9149	.9142	.9139	.9136	.9129	.9122	.9115	.9110	.9107	.9099
.0070	.9096	.9090	.9084	.9077	.9073	.9070	.9063	.9055	.9047	.9043	.9039	.9031
.0080	.9037	.9030	.9024	.9016	.9012	.9009	.9001	.8993	.8985	.8980	.8976	.8967
.0090	.8981	.8975	.8967	.8960	.8956	.8952	.8944	.8936	.8927	.8922	.8918	.8908
.0100	.8929	.8922	.8915	.8907	.8902	.8899	.8890	.8882	.8872	.8867	.8863	.8853
.0200	.8520	.8510	.8501	.8490	.8484	.8479	.8468	.8456	.8443	.8436	.8430	.8417
.0300	.8219	.8208	.8196	.8183	.8176	.8170	.8157	.8143	.8128	.8119	.8113	.8097
.0400	.7973	.7960	.7947	.7933	.7925	.7919	.7904	.7888	.7872	.7862	.7855	.7837
.0500	.7763	.7749	.7735	.7720	.7710	.7704	.7687	.7670	.7653	.7642	.7634	.7615
.0600	.7578	.7563	.7547	.7531	.7521	.7514	.7497	.7479	.7460	.7448	.7440	.7419
.0700	.7411	.7395	.7379	.7362	.7352	.7344	.7326	.7307	.7287	.7274	.7266	.7244
.0800	.7259	.7243	.7226	.7208	.7197	.7189	.7170	.7150	.7129	.7116	.7107	.7085
.0900	.7120	.7102	.7085	.7066	.7055	.7047	.7027	.7006	.6984	.6971	.6962	.6938
.1000	.6990	.6972	.6954	.6935	.6923	.6915	.6894	.6872	.6850	.6836	.6827	.6802

TABLE 13. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_-=1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9878	.9877	.9875	.9874	.9873	.9871	.9870	.9868	.9867	.9865	.9864
.0002	.9828	.9826	.9824	.9822	.9820	.9819	.9817	.9815	.9812	.9810	.9808
.0003	.9789	.9787	.9785	.9783	.9781	.9778	.9776	.9773	.9771	.9768	.9765
.0004	.9757	.9755	.9752	.9750	.9747	.9744	.9742	.9739	.9736	.9733	.9729
.0005	.9729	.9726	.9723	.9721	.9718	.9715	.9712	.9708	.9705	.9701	.9698
.0006	.9703	.9700	.9697	.9694	.9691	.9688	.9684	.9681	.9677	.9673	.9669
.0007	.9680	.9677	.9673	.9670	.9667	.9663	.9660	.9656	.9652	.9648	.9643
.0008	.9658	.9655	.9651	.9648	.9644	.9640	.9637	.9632	.9628	.9624	.9619
.0009	.9638	.9634	.9631	.9627	.9623	.9619	.9615	.9611	.9606	.9602	.9597
.0010	.9618	.9615	.9611	.9607	.9603	.9599	.9595	.9590	.9585	.9580	.9575
.0020	.9465	.9460	.9454	.9449	.9443	.9437	.9431	.9425	.9419	.9412	.9405
.0030	.9348	.9342	.9336	.9329	.9322	.9315	.9308	.9300	.9293	.9285	.9276
.0040	.9252	.9244	.9237	.9230	.9222	.9214	.9205	.9197	.9188	.9179	.9169
.0050	.9167	.9159	.9151	.9143	.9134	.9125	.9116	.9106	.9096	.9086	.9075
.0060	.9091	.9083	.9074	.9065	.9055	.9046	.9036	.9025	.9015	.9003	.8992
.0070	.9022	.9013	.9003	.8994	.8984	.8973	.8963	.8951	.8940	.8928	.8915
.0080	.8958	.8948	.8938	.8928	.8917	.8906	.8895	.8883	.8871	.8858	.8845
.0090	.8899	.8888	.8878	.8867	.8856	.8844	.8832	.8820	.8807	.8793	.8779
.0100	.8843	.8832	.8821	.8809	.8798	.8786	.8773	.8760	.8746	.8733	.8718
.0200	.8403	.8389	.8374	.8359	.8343	.8327	.8310	.8292	.8274	.8256	.8236
.0300	.8081	.8064	.8047	.8029	.8010	.7991	.7971	.7951	.7930	.7908	.7885
.0400	.7819	.7800	.7781	.7761	.7740	.7719	.7697	.7674	.7650	.7626	.7600
.0500	.7595	.7575	.7554	.7532	.7509	.7486	.7462	.7437	.7412	.7386	.7358
.0600	.7399	.7376	.7354	.7331	.7307	.7282	.7257	.7230	.7203	.7175	.7146
.0700	.7222	.7199	.7175	.7151	.7126	.7100	.7073	.7045	.7016	.6987	.6956
.0800	.7062	.7037	.7013	.6987	.6961	.6934	.6906	.6876	.6847	.6816	.6784
.0900	.6914	.6889	.6863	.6837	.6809	.6781	.6752	.6722	.6691	.6659	.6626
.1000	.6778	.6751	.6725	.6698	.6669	.6640	.6610	.6579	.6547	.6514	.6480

TABLE 14. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9776	.9774	.9773	.9771	.9770	.9769	.9768	.9766	.9764	.9762	.9761	.9759
.0002	.9685	.9683	.9680	.9678	.9676	.9675	.9673	.9670	.9667	.9665	.9664	.9661
.0003	.9615	.9613	.9610	.9607	.9605	.9604	.9601	.9597	.9594	.9592	.9590	.9587
.0004	.9557	.9554	.9551	.9548	.9546	.9544	.9540	.9537	.9533	.9530	.9529	.9524
.0005	.9506	.9503	.9499	.9496	.9493	.9492	.9488	.9483	.9479	.9476	.9474	.9470
.0006	.9460	.9457	.9453	.9449	.9446	.9444	.9440	.9436	.9431	.9428	.9426	.9421
.0007	.9418	.9414	.9410	.9406	.9403	.9401	.9397	.9392	.9387	.9383	.9381	.9376
.0008	.9379	.9375	.9371	.9366	.9363	.9361	.9356	.9351	.9346	.9342	.9340	.9334
.0009	.9343	.9339	.9334	.9329	.9326	.9324	.9319	.9313	.9307	.9304	.9301	.9295
.0010	.9309	.9304	.9299	.9294	.9291	.9289	.9283	.9277	.9271	.9267	.9265	.9258
.0020	.9037	.9030	.9024	.9016	.9012	.9009	.9001	.8993	.8985	.8980	.8976	.8967
.0030	.8833	.8826	.8818	.8809	.8804	.8800	.8791	.8782	.8772	.8765	.8761	.8750
.0040	.8665	.8657	.8648	.8638	.8632	.8628	.8618	.8607	.8596	.8589	.8584	.8572
.0050	.8520	.8510	.8501	.8490	.8484	.8479	.8468	.8456	.8443	.8436	.8430	.8417
.0060	.8391	.8380	.8370	.8358	.8352	.8346	.8334	.8321	.8308	.8300	.8294	.8280
.0070	.8274	.8263	.8251	.8239	.8232	.8226	.8213	.8200	.8186	.8177	.8171	.8155
.0080	.8166	.8155	.8142	.8130	.8122	.8116	.8103	.8088	.8073	.8064	.8058	.8041
.0090	.8067	.8054	.8042	.8028	.8020	.8014	.8000	.7985	.7969	.7959	.7953	.7936
.0100	.7973	.7960	.7947	.7933	.7925	.7919	.7904	.7888	.7872	.7862	.7855	.7837
.0200	.7259	.7243	.7226	.7208	.7197	.7189	.7170	.7150	.7129	.7116	.7107	.7085
.0300	.6755	.6736	.6717	.6697	.6684	.6675	.6654	.6631	.6607	.6592	.6582	.6557
.0400	.6357	.6337	.6316	.6294	.6281	.6271	.6247	.6222	.6197	.6181	.6170	.6142
.0500	.6026	.6005	.5983	.5959	.5945	.5935	.5910	.5884	.5856	.5839	.5828	.5799
.0600	.5742	.5719	.5696	.5672	.5657	.5646	.5620	.5593	.5565	.5547	.5535	.5505
.0700	.5492	.5469	.5445	.5420	.5405	.5394	.5367	.5339	.5309	.5291	.5279	.5248
.0800	.5270	.5246	.5221	.5196	.5180	.5169	.5141	.5112	.5082	.5064	.5051	.5019
.0900	.5069	.5045	.5019	.4993	.4977	.4966	.4938	.4908	.4878	.4859	.4846	.4814
.1000	.4886	.4861	.4836	.4809	.4793	.4781	.4753	.4723	.4692	.4673	.4660	.4627

TABLE 14. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9757	.9755	.9752	.9750	.9747	.9744	.9742	.9739	.9736	.9733	.9729
.0002	.9658	.9655	.9651	.9648	.9644	.9640	.9637	.9632	.9628	.9624	.9619
.0003	.9583	.9579	.9575	.9570	.9566	.9561	.9557	.9552	.9547	.9541	.9536
.0004	.9520	.9515	.9511	.9506	.9501	.9495	.9490	.9484	.9478	.9472	.9466
.0005	.9465	.9460	.9454	.9449	.9443	.9437	.9431	.9425	.9419	.9412	.9405
.0006	.9415	.9410	.9404	.9398	.9392	.9385	.9379	.9372	.9365	.9358	.9350
.0007	.9370	.9364	.9358	.9351	.9345	.9338	.9331	.9323	.9316	.9308	.9300
.0008	.9328	.9321	.9315	.9308	.9301	.9294	.9286	.9278	.9270	.9262	.9253
.0009	.9289	.9282	.9275	.9268	.9260	.9253	.9245	.9236	.9228	.9219	.9210
.0010	.9252	.9244	.9237	.9230	.9222	.9214	.9205	.9197	.9188	.9179	.9169
.0020	.8958	.8948	.8938	.8928	.8917	.8906	.8895	.8883	.8871	.8858	.8845
.0030	.8739	.8728	.8716	.8704	.8691	.8678	.8664	.8650	.8635	.8620	.8604
.0040	.8559	.8546	.8532	.8519	.8504	.8489	.8474	.8458	.8442	.8425	.8407
.0050	.8403	.8389	.8374	.8359	.8343	.8327	.8310	.8292	.8274	.8256	.8236
.0060	.8265	.8249	.8233	.8217	.8200	.8183	.8164	.8146	.8126	.8106	.8085
.0070	.8140	.8123	.8106	.8089	.8071	.8052	.8033	.8013	.7992	.7971	.7949
.0080	.8025	.8007	.7990	.7971	.7952	.7933	.7912	.7891	.7869	.7847	.7824
.0090	.7918	.7900	.7882	.7862	.7842	.7822	.7801	.7779	.7756	.7733	.7708
.0100	.7819	.7800	.7781	.7761	.7740	.7719	.7697	.7674	.7650	.7626	.7600
.0200	.7062	.7037	.7013	.6987	.6961	.6934	.6906	.6876	.6847	.6816	.6784
.0300	.6531	.6503	.6475	.6446	.6416	.6386	.6354	.6321	.6288	.6253	.6217
.0400	.6114	.6084	.6054	.6023	.5991	.5958	.5924	.5888	.5852	.5815	.5776
.0500	.5769	.5738	.5706	.5673	.5639	.5604	.5569	.5532	.5494	.5455	.5414
.0600	.5474	.5441	.5408	.5374	.5339	.5303	.5266	.5228	.5188	.5148	.5106
.0700	.5216	.5182	.5148	.5113	.5077	.5040	.5002	.4963	.4923	.4881	.4838
.0800	.4987	.4952	.4918	.4882	.4845	.4807	.4769	.4729	.4687	.4646	.4602
.0900	.4781	.4746	.4710	.4674	.4637	.4599	.4559	.4519	.4477	.4434	.4390
.1000	.4593	.4558	.4522	.4486	.4448	.4409	.4370	.4329	.4286	.4244	.4199

TABLE 15. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9666	.9664	.9661	.9659	.9657	.9656	.9653	.9650	.9647	.9646	.9644	.9641
.0002	.9531	.9528	.9524	.9521	.9519	.9517	.9513	.9509	.9505	.9502	.9501	.9496
.0003	.9429	.9425	.9421	.9416	.9414	.9412	.9407	.9402	.9397	.9394	.9392	.9386
.0004	.9343	.9339	.9334	.9329	.9326	.9324	.9319	.9313	.9307	.9304	.9301	.9295
.0005	.9268	.9263	.9258	.9253	.9250	.9247	.9241	.9235	.9229	.9225	.9222	.9215
.0006	.9202	.9196	.9190	.9185	.9181	.9178	.9172	.9165	.9158	.9154	.9151	.9143
.0007	.9140	.9135	.9129	.9122	.9118	.9116	.9109	.9102	.9094	.9089	.9086	.9078
.0008	.9084	.9078	.9071	.9065	.9060	.9057	.9050	.9043	.9035	.9030	.9026	.9018
.0009	.9031	.9024	.9018	.9011	.9006	.9003	.8996	.8988	.8979	.8974	.8970	.8961
.0010	.8981	.8975	.8967	.8960	.8956	.8952	.8944	.8936	.8927	.8922	.8918	.8908
.0020	.8590	.8581	.8572	.8562	.8556	.8551	.8540	.8529	.8517	.8510	.8505	.8492
.0030	.8302	.8291	.8280	.8268	.8261	.8255	.8243	.8229	.8215	.8207	.8201	.8185
.0040	.8067	.8054	.8042	.8028	.8020	.8014	.8000	.7985	.7969	.7959	.7953	.7936
.0050	.7865	.7851	.7837	.7823	.7814	.7808	.7792	.7776	.7758	.7748	.7741	.7722
.0060	.7686	.7672	.7657	.7642	.7632	.7625	.7609	.7591	.7573	.7561	.7554	.7534
.0070	.7526	.7511	.7495	.7479	.7469	.7461	.7444	.7425	.7406	.7394	.7386	.7365
.0080	.7380	.7364	.7347	.7330	.7320	.7312	.7294	.7274	.7254	.7241	.7233	.7211
.0090	.7245	.7228	.7211	.7193	.7182	.7174	.7155	.7135	.7114	.7101	.7092	.7069
.0100	.7120	.7102	.7085	.7066	.7055	.7047	.7027	.7006	.6984	.6971	.6962	.6938
.0200	.6185	.6164	.6142	.6120	.6106	.6096	.6071	.6046	.6019	.6003	.5992	.5963
.0300	.5552	.5529	.5505	.5480	.5465	.5454	.5427	.5399	.5370	.5352	.5340	.5309
.0400	.5069	.5045	.5019	.4993	.4977	.4966	.4938	.4908	.4878	.4859	.4846	.4814
.0500	.4678	.4653	.4627	.4600	.4584	.4572	.4543	.4513	.4482	.4462	.4449	.4416
.0600	.4351	.4325	.4299	.4272	.4255	.4243	.4213	.4183	.4151	.4132	.4118	.4084
.0700	.4070	.4045	.4018	.3990	.3973	.3961	.3932	.3901	.3869	.3849	.3836	.3802
.0800	.3826	.3799	.3773	.3745	.3728	.3716	.3686	.3655	.3623	.3604	.3590	.3556
.0900	.3609	.3583	.3556	.3528	.3512	.3499	.3470	.3439	.3407	.3387	.3374	.3340
.1000	.3415	.3389	.3363	.3335	.3318	.3306	.3277	.3246	.3214	.3195	.3181	.3147

TABLE 15. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9638	.9634	.9631	.9627	.9623	.9619	.9615	.9611	.9606	.9602	.9597
.0002	.9492	.9487	.9482	.9476	.9471	.9466	.9460	.9454	.9448	.9441	.9434
.0003	.9381	.9375	.9369	.9363	.9356	.9349	.9342	.9335	.9328	.9320	.9312
.0004	.9289	.9282	.9275	.9268	.9260	.9253	.9245	.9236	.9228	.9219	.9210
.0005	.9208	.9200	.9193	.9185	.9177	.9168	.9159	.9150	.9141	.9131	.9121
.0006	.9136	.9128	.9119	.9111	.9102	.9092	.9083	.9073	.9063	.9052	.9041
.0007	.9070	.9061	.9052	.9043	.9033	.9023	.9013	.9002	.8991	.8980	.8968
.0008	.9009	.9000	.8990	.8980	.8970	.8960	.8949	.8937	.8926	.8914	.8901
.0009	.8952	.8942	.8932	.8922	.8911	.8900	.8889	.8877	.8864	.8852	.8838
.0010	.8899	.8888	.8878	.8867	.8856	.8844	.8832	.8820	.8807	.8793	.8779
.0020	.8479	.8465	.8451	.8436	.8421	.8405	.8389	.8373	.8355	.8337	.8319
.0030	.8170	.8154	.8137	.8120	.8102	.8084	.8065	.8045	.8024	.8004	.7981
.0040	.7918	.7900	.7882	.7862	.7842	.7822	.7801	.7779	.7756	.7733	.7708
.0050	.7703	.7683	.7663	.7642	.7621	.7598	.7575	.7551	.7527	.7501	.7475
.0060	.7514	.7493	.7471	.7449	.7426	.7402	.7377	.7352	.7325	.7298	.7270
.0070	.7344	.7321	.7298	.7275	.7251	.7225	.7200	.7173	.7145	.7116	.7086
.0080	.7189	.7165	.7141	.7117	.7091	.7065	.7038	.7010	.6981	.6951	.6920
.0090	.7046	.7022	.6997	.6971	.6945	.6918	.6890	.6860	.6830	.6800	.6767
.0100	.6914	.6889	.6863	.6837	.6809	.6781	.6752	.6722	.6691	.6659	.6626
.0200	.5934	.5903	.5872	.5840	.5807	.5773	.5739	.5702	.5665	.5627	.5587
.0300	.5277	.5244	.5210	.5175	.5140	.5103	.5065	.5026	.4986	.4945	.4902
.0400	.4781	.4746	.4710	.4674	.4637	.4599	.4559	.4519	.4477	.4434	.4390
.0500	.4382	.4346	.4310	.4273	.4235	.4196	.4156	.4114	.4072	.4029	.3983
.0600	.4050	.4014	.3977	.3940	.3901	.3862	.3822	.3780	.3737	.3694	.3648
.0700	.3767	.3731	.3694	.3656	.3618	.3578	.3538	.3496	.3454	.3410	.3365
.0800	.3521	.3485	.3449	.3411	.3373	.3333	.3293	.3252	.3209	.3166	.3121
.0900	.3305	.3269	.3233	.3196	.3157	.3118	.3079	.3037	.2996	.2953	.2909
.1000	.3113	.3077	.3041	.3004	.2967	.2928	.2889	.2848	.2806	.2764	.2721

TABLE 16. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9557	.9554	.9551	.9548	.9546	.9544	.9540	.9537	.9533	.9530	.9529	.9524
.0002	.9379	.9375	.9371	.9366	.9363	.9361	.9356	.9351	.9346	.9342	.9340	.9334
.0003	.9245	.9240	.9235	.9229	.9226	.9223	.9217	.9211	.9205	.9200	.9198	.9190
.0004	.9134	.9128	.9122	.9116	.9112	.9109	.9102	.9095	.9087	.9083	.9079	.9071
.0005	.9037	.9030	.9024	.9016	.9012	.9009	.9001	.8993	.8985	.8980	.8976	.8967
.0006	.8950	.8943	.8935	.8928	.8923	.8920	.8912	.8903	.8894	.8888	.8884	.8875
.0007	.8871	.8863	.8855	.8847	.8842	.8838	.8830	.8820	.8811	.8805	.8801	.8790
.0008	.8797	.8789	.8781	.8773	.8767	.8763	.8754	.8744	.8734	.8728	.8723	.8712
.0009	.8729	.8721	.8712	.8703	.8698	.8694	.8684	.8673	.8663	.8656	.8651	.8640
.0010	.8665	.8657	.8648	.8638	.8632	.8628	.8618	.8607	.8596	.8589	.8584	.8572
.0020	.8166	.8155	.8142	.8130	.8122	.8116	.8103	.8088	.8073	.8064	.8058	.8041
.0030	.7803	.7789	.7775	.7760	.7751	.7744	.7728	.7712	.7694	.7683	.7676	.7657
.0040	.7509	.7494	.7478	.7461	.7452	.7444	.7426	.7408	.7388	.7376	.7368	.7347
.0050	.7259	.7243	.7226	.7208	.7197	.7189	.7170	.7150	.7129	.7116	.7107	.7085
.0060	.7041	.7023	.7005	.6986	.6975	.6966	.6946	.6925	.6903	.6889	.6879	.6855
.0070	.6846	.6827	.6808	.6788	.6776	.6767	.6746	.6724	.6701	.6686	.6676	.6651
.0080	.6669	.6650	.6630	.6609	.6597	.6587	.6565	.6542	.6518	.6503	.6493	.6466
.0090	.6507	.6487	.6467	.6445	.6432	.6423	.6400	.6376	.6351	.6335	.6325	.6298
.0100	.6357	.6337	.6316	.6294	.6281	.6271	.6247	.6222	.6197	.6181	.6170	.6142
.0200	.5270	.5246	.5221	.5196	.5180	.5169	.5141	.5112	.5082	.5064	.5051	.5019
.0300	.4563	.4538	.4512	.4485	.4468	.4456	.4427	.4397	.4365	.4346	.4333	.4299
.0400	.4042	.4016	.3989	.3961	.3945	.3932	.3903	.3872	.3840	.3820	.3807	.3773
.0500	.3632	.3606	.3579	.3551	.3534	.3522	.3492	.3462	.3430	.3410	.3397	.3363
.0600	.3297	.3271	.3245	.3217	.3200	.3188	.3159	.3128	.3097	.3077	.3064	.3030
.0700	.3017	.2991	.2965	.2938	.2921	.2909	.2880	.2850	.2819	.2800	.2787	.2754
.0800	.2777	.2752	.2726	.2699	.2683	.2671	.2643	.2614	.2583	.2564	.2552	.2519
.0900	.2569	.2545	.2520	.2493	.2477	.2466	.2438	.2409	.2379	.2361	.2349	.2317
.1000	.2387	.2363	.2338	.2313	.2297	.2286	.2259	.2231	.2202	.2184	.2172	.2141

TABLE 16. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9520	.9515	.9511	.9506	.9501	.9495	.9490	.9484	.9478	.9472	.9466
.0002	.9328	.9321	.9315	.9308	.9301	.9294	.9286	.9278	.9270	.9262	.9253
.0003	.9183	.9175	.9167	.9159	.9151	.9142	.9133	.9124	.9114	.9104	.9093
.0004	.9063	.9054	.9045	.9036	.9026	.9016	.9006	.8995	.8984	.8972	.8960
.0005	.8958	.8948	.8938	.8928	.8917	.8906	.8895	.8883	.8871	.8858	.8845
.0006	.8865	.8854	.8843	.8832	.8821	.8809	.8796	.8783	.8770	.8756	.8742
.0007	.8779	.8768	.8757	.8745	.8732	.8720	.8706	.8693	.8678	.8664	.8648
.0008	.8701	.8689	.8677	.8664	.8651	.8637	.8623	.8609	.8594	.8578	.8562
.0009	.8628	.8615	.8602	.8589	.8575	.8561	.8546	.8531	.8515	.8499	.8482
.0010	.8559	.8546	.8532	.8519	.8504	.8489	.8474	.8458	.8442	.8425	.8407
.0020	.8025	.8007	.7990	.7971	.7952	.7933	.7912	.7891	.7869	.7847	.7824
.0030	.7638	.7617	.7597	.7575	.7553	.7530	.7507	.7482	.7457	.7431	.7404
.0040	.7326	.7303	.7280	.7257	.7232	.7207	.7181	.7154	.7126	.7097	.7067
.0050	.7062	.7037	.7013	.6987	.6961	.6934	.6906	.6876	.6847	.6816	.6784
.0060	.6831	.6805	.6779	.6752	.6724	.6695	.6666	.6635	.6603	.6571	.6537
.0070	.6626	.6599	.6571	.6543	.6514	.6484	.6453	.6420	.6387	.6354	.6318
.0080	.6440	.6412	.6383	.6354	.6324	.6293	.6260	.6227	.6193	.6158	.6121
.0090	.6270	.6241	.6212	.6182	.6150	.6118	.6085	.6051	.6015	.5979	.5941
.0100	.6114	.6084	.6054	.6023	.5991	.5958	.5924	.5888	.5852	.5815	.5776
.0200	.4987	.4952	.4918	.4882	.4845	.4807	.4769	.4729	.4687	.4646	.4602
.0300	.4265	.4229	.4193	.4155	.4117	.4078	.4038	.3996	.3954	.3910	.3865
.0400	.3738	.3702	.3665	.3627	.3589	.3549	.3509	.3467	.3425	.3382	.3336
.0500	.3328	.3292	.3256	.3218	.3180	.3141	.3101	.3060	.3018	.2975	.2931
.0600	.2996	.2961	.2925	.2888	.2851	.2812	.2773	.2733	.2692	.2650	.2607
.0700	.2721	.2686	.2651	.2615	.2578	.2540	.2502	.2463	.2423	.2383	.2341
.0800	.2487	.2453	.2418	.2383	.2348	.2311	.2274	.2236	.2197	.2158	.2117
.0900	.2285	.2252	.2219	.2185	.2150	.2115	.2079	.2042	.2004	.1966	.1927
.1000	.2110	.2078	.2045	.2012	.1978	.1944	.1909	.1874	.1837	.1801	.1763

TABLE 17. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9343	.9339	.9334	.9329	.9326	.9324	.9319	.9313	.9307	.9304	.9301	.9295
.0002	.9084	.9078	.9071	.9065	.9060	.9057	.9050	.9043	.9035	.9030	.9026	.9018
.0003	.8890	.8882	.8875	.8867	.8862	.8858	.8849	.8840	.8831	.8825	.8821	.8811
.0004	.8729	.8721	.8712	.8703	.8698	.8694	.8684	.8673	.8663	.8656	.8651	.8640
.0005	.8590	.8581	.8572	.8562	.8556	.8551	.8540	.8529	.8517	.8510	.8505	.8492
.0006	.8467	.8457	.8447	.8436	.8429	.8424	.8413	.8400	.8388	.8380	.8374	.8360
.0007	.8355	.8344	.8333	.8321	.8314	.8309	.8297	.8284	.8270	.8262	.8256	.8241
.0008	.8252	.8240	.8229	.8217	.8209	.8204	.8191	.8177	.8162	.8154	.8147	.8132
.0009	.8156	.8144	.8132	.8119	.8111	.8106	.8092	.8078	.8063	.8053	.8047	.8031
.0010	.8067	.8054	.8042	.8028	.8020	.8014	.8000	.7985	.7969	.7959	.7953	.7936
.0020	.7380	.7364	.7347	.7330	.7320	.7312	.7294	.7274	.7254	.7241	.7233	.7211
.0030	.6893	.6874	.6856	.6836	.6824	.6815	.6794	.6772	.6749	.6735	.6725	.6700
.0040	.6507	.6487	.6467	.6445	.6432	.6423	.6400	.6376	.6351	.6335	.6325	.6298
.0050	.6185	.6164	.6142	.6120	.6106	.6096	.6071	.6046	.6019	.6003	.5992	.5963
.0060	.5908	.5886	.5863	.5839	.5825	.5814	.5789	.5762	.5735	.5718	.5706	.5676
.0070	.5664	.5641	.5618	.5593	.5578	.5567	.5541	.5513	.5485	.5467	.5455	.5424
.0080	.5446	.5422	.5398	.5373	.5358	.5347	.5320	.5291	.5262	.5244	.5232	.5200
.0090	.5249	.5225	.5200	.5174	.5159	.5147	.5120	.5091	.5061	.5042	.5030	.4998
.0100	.5069	.5045	.5019	.4993	.4977	.4966	.4938	.4908	.4878	.4859	.4846	.4814
.0200	.3826	.3799	.3773	.3745	.3728	.3716	.3686	.3655	.3623	.3604	.3590	.3556
.0300	.3083	.3057	.3031	.3003	.2987	.2975	.2946	.2915	.2884	.2865	.2852	.2819
.0400	.2569	.2545	.2520	.2493	.2477	.2466	.2438	.2409	.2379	.2361	.2349	.2317
.0500	.2189	.2165	.2141	.2116	.2101	.2090	.2064	.2037	.2009	.1991	.1980	.1950
.0600	.1893	.1871	.1848	.1825	.1811	.1800	.1775	.1750	.1723	.1707	.1696	.1668
.0700	.1657	.1636	.1614	.1592	.1579	.1569	.1546	.1522	.1497	.1482	.1471	.1445
.0800	.1463	.1444	.1423	.1402	.1390	.1381	.1359	.1336	.1313	.1299	.1289	.1264
.0900	.1302	.1284	.1265	.1245	.1233	.1224	.1204	.1183	.1161	.1147	.1138	.1115
.1000	.1166	.1149	.1131	.1112	.1101	.1093	.1074	.1054	.1033	.1021	.1012	.0991

TABLE 17. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9289	.9282	.9275	.9268	.9260	.9253	.9245	.9236	.9228	.9219	.9210
.0002	.9009	.9000	.8990	.8980	.8970	.8960	.8949	.8937	.8926	.8914	.8901
.0003	.8800	.8789	.8778	.8766	.8754	.8741	.8728	.8715	.8701	.8686	.8671
.0004	.8628	.8615	.8602	.8589	.8575	.8561	.8546	.8531	.8515	.8499	.8482
.0005	.8479	.8465	.8451	.8436	.8421	.8405	.8389	.8373	.8355	.8337	.8319
.0006	.8346	.8331	.8316	.8300	.8284	.8267	.8250	.8232	.8213	.8194	.8174
.0007	.8226	.8210	.8194	.8177	.8160	.8142	.8124	.8104	.8085	.8064	.8043
.0008	.8116	.8099	.8082	.8064	.8046	.8027	.8008	.7988	.7967	.7945	.7923
.0009	.8014	.7996	.7978	.7960	.7941	.7921	.7901	.7880	.7858	.7835	.7812
.0010	.7918	.7900	.7882	.7862	.7842	.7822	.7801	.7779	.7756	.7733	.7708
.0020	.7189	.7165	.7141	.7117	.7091	.7065	.7038	.7010	.6981	.6951	.6920
.0030	.6675	.6648	.6621	.6593	.6564	.6534	.6504	.6472	.6439	.6406	.6370
.0040	.6270	.6241	.6212	.6182	.6150	.6118	.6085	.6051	.6015	.5979	.5941
.0050	.5934	.5903	.5872	.5840	.5807	.5773	.5739	.5702	.5665	.5627	.5587
.0060	.5646	.5614	.5582	.5548	.5514	.5479	.5442	.5405	.5366	.5327	.5285
.0070	.5393	.5360	.5327	.5292	.5257	.5221	.5183	.5145	.5105	.5064	.5022
.0080	.5168	.5134	.5100	.5065	.5029	.4992	.4953	.4914	.4873	.4832	.4789
.0090	.4965	.4931	.4896	.4860	.4823	.4786	.4747	.4707	.4665	.4623	.4579
.0100	.4781	.4746	.4710	.4674	.4637	.4599	.4559	.4519	.4477	.4434	.4390
.0200	.3521	.3485	.3449	.3411	.3373	.3333	.3293	.3252	.3209	.3166	.3121
.0300	.2785	.2750	.2715	.2679	.2642	.2604	.2566	.2526	.2486	.2445	.2403
.0400	.2285	.2252	.2219	.2185	.2150	.2115	.2079	.2042	.2004	.1966	.1927
.0500	.1920	.1889	.1858	.1826	.1793	.1760	.1727	.1693	.1658	.1623	.1587
.0600	.1640	.1611	.1582	.1552	.1522	.1491	.1460	.1429	.1397	.1364	.1331
.0700	.1419	.1392	.1365	.1337	.1309	.1280	.1252	.1222	.1193	.1163	.1132
.0800	.1240	.1215	.1189	.1164	.1137	.1111	.1084	.1057	.1030	.1003	.0974
.0900	.1093	.1069	.1045	.1021	.0997	.0972	.0948	.0923	.0897	.0872	.0846
.1000	.0969	.0947	.0925	.0903	.0880	.0857	.0834	.0811	.0788	.0764	.0740

TABLE 18. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9134	.9128	.9122	.9116	.9112	.9109	.9102	.9095	.9087	.9083	.9079	.9071
.0002	.8797	.8789	.8781	.8773	.8767	.8763	.8754	.8744	.8734	.8728	.8723	.8712
.0003	.8548	.8538	.8528	.8518	.8512	.8507	.8496	.8484	.8472	.8465	.8460	.8446
.0004	.8343	.8332	.8321	.8309	.8302	.8297	.8285	.8271	.8258	.8249	.8244	.8229
.0005	.8166	.8155	.8142	.8130	.8122	.8116	.8103	.8088	.8073	.8064	.8058	.8041
.0006	.8010	.7997	.7984	.7971	.7962	.7956	.7942	.7926	.7910	.7900	.7893	.7876
.0007	.7869	.7855	.7842	.7827	.7818	.7812	.7796	.7780	.7763	.7752	.7745	.7727
.0008	.7740	.7725	.7711	.7696	.7687	.7680	.7663	.7646	.7628	.7617	.7610	.7590
.0009	.7620	.7606	.7590	.7574	.7565	.7558	.7541	.7523	.7504	.7492	.7485	.7464
.0010	.7509	.7494	.7478	.7461	.7452	.7444	.7426	.7408	.7388	.7376	.7368	.7347
.0020	.6669	.6650	.6630	.6609	.6597	.6587	.6565	.6542	.6518	.6503	.6493	.6466
.0030	.6088	.6067	.6045	.6022	.6008	.5998	.5973	.5947	.5920	.5903	.5892	.5863
.0040	.5639	.5616	.5592	.5567	.5552	.5542	.5515	.5488	.5459	.5441	.5429	.5398
.0050	.5270	.5246	.5221	.5196	.5180	.5169	.5141	.5112	.5082	.5064	.5051	.5019
.0060	.4957	.4933	.4907	.4881	.4865	.4853	.4825	.4795	.4764	.4745	.4733	.4700
.0070	.4686	.4661	.4635	.4608	.4592	.4580	.4551	.4521	.4490	.4470	.4457	.4424
.0080	.4447	.4422	.4396	.4368	.4352	.4339	.4310	.4280	.4248	.4229	.4215	.4182
.0090	.4234	.4208	.4182	.4154	.4137	.4125	.4096	.4065	.4033	.4014	.4000	.3966
.0100	.4042	.4016	.3989	.3961	.3945	.3932	.3903	.3872	.3840	.3820	.3807	.3773
.0200	.2777	.2752	.2726	.2699	.2683	.2671	.2643	.2614	.2583	.2564	.2552	.2519
.0300	.2082	.2059	.2036	.2011	.1996	.1986	.1960	.1933	.1906	.1889	.1877	.1848
.0400	.1634	.1613	.1591	.1569	.1556	.1546	.1523	.1499	.1474	.1459	.1449	.1423
.0500	.1319	.1300	.1281	.1261	.1249	.1240	.1220	.1198	.1176	.1163	.1154	.1131
.0600	.1087	.1070	.1053	.1035	.1024	.1016	.0998	.0979	.0959	.0947	.0939	.0918
.0700	.0910	.0895	.0879	.0863	.0853	.0846	.0830	.0812	.0795	.0784	.0777	.0758
.0800	.0771	.0757	.0743	.0729	.0720	.0714	.0699	.0683	.0667	.0658	.0651	.0635
.0900	.0660	.0648	.0635	.0622	.0614	.0608	.0594	.0580	.0566	.0557	.0552	.0537
.1000	.0570	.0558	.0547	.0535	.0528	.0523	.0510	.0498	.0485	.0477	.0472	.0458

TABLE 18. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9063	.9054	.9045	.9036	.9026	.9016	.9006	.8995	.8984	.8972	.8960
.0002	.8701	.8689	.8677	.8664	.8651	.8637	.8623	.8609	.8594	.8578	.8562
.0003	.8433	.8419	.8404	.8389	.8374	.8358	.8341	.8324	.8306	.8288	.8269
.0004	.8213	.8197	.8181	.8164	.8147	.8129	.8110	.8091	.8071	.8051	.8029
.0005	.8025	.8007	.7990	.7971	.7952	.7933	.7912	.7891	.7869	.7847	.7824
.0006	.7858	.7839	.7820	.7801	.7780	.7759	.7737	.7715	.7691	.7668	.7642
.0007	.7708	.7688	.7668	.7647	.7625	.7603	.7580	.7556	.7531	.7506	.7479
.0008	.7570	.7550	.7528	.7506	.7484	.7460	.7436	.7411	.7385	.7359	.7331
.0009	.7444	.7422	.7400	.7377	.7353	.7329	.7304	.7278	.7251	.7223	.7194
.0010	.7326	.7303	.7280	.7257	.7232	.7207	.7181	.7154	.7126	.7097	.7067
.0020	.6440	.6412	.6383	.6354	.6324	.6293	.6260	.6227	.6193	.6158	.6121
.0030	.5833	.5802	.5771	.5738	.5705	.5670	.5635	.5598	.5560	.5522	.5481
.0040	.5367	.5334	.5300	.5266	.5230	.5194	.5157	.5118	.5078	.5037	.4995
.0050	.4987	.4952	.4918	.4882	.4845	.4807	.4769	.4729	.4687	.4646	.4602
.0060	.4666	.4631	.4596	.4559	.4521	.4483	.4443	.4402	.4360	.4318	.4273
.0070	.4390	.4354	.4318	.4281	.4243	.4204	.4164	.4122	.4080	.4037	.3992
.0080	.4147	.4111	.4075	.4037	.3999	.3960	.3919	.3878	.3835	.3792	.3746
.0090	.3932	.3895	.3859	.3821	.3783	.3743	.3703	.3661	.3618	.3575	.3530
.0100	.3738	.3702	.3665	.3627	.3589	.3549	.3509	.3467	.3425	.3382	.3336
.0200	.2487	.2453	.2418	.2383	.2348	.2311	.2274	.2236	.2197	.2158	.2117
.0300	.1819	.1788	.1758	.1727	.1695	.1663	.1630	.1597	.1563	.1529	.1494
.0400	.1397	.1370	.1343	.1316	.1288	.1260	.1231	.1202	.1173	.1144	.1113
.0500	.1108	.1084	.1060	.1036	.1011	.0987	.0962	.0936	.0911	.0885	.0859
.0600	.0898	.0877	.0855	.0834	.0813	.0791	.0769	.0747	.0725	.0702	.0680
.0700	.0740	.0721	.0703	.0684	.0665	.0645	.0626	.0607	.0587	.0568	.0548
.0800	.0618	.0602	.0585	.0568	.0551	.0534	.0517	.0500	.0483	.0466	.0448
.0900	.0522	.0507	.0492	.0477	.0462	.0447	.0432	.0417	.0402	.0387	.0371
.1000	.0445	.0432	.0418	.0405	.0391	.0378	.0365	.0351	.0338	.0324	.0311

TABLE 19. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9031	.9024	.9018	.9011	.9006	.9003	.8996	.8988	.8979	.8974	.8970	.8961
.0002	.8658	.8649	.8640	.8630	.8624	.8620	.8610	.8599	.8587	.8580	.8576	.8563
.0003	.8382	.8371	.8360	.8349	.8342	.8337	.8325	.8312	.8299	.8290	.8285	.8270
.0004	.8156	.8144	.8132	.8119	.8111	.8106	.8092	.8078	.8063	.8053	.8047	.8031
.0005	.7962	.7949	.7936	.7922	.7914	.7907	.7892	.7877	.7860	.7850	.7843	.7825
.0006	.7791	.7777	.7763	.7748	.7739	.7732	.7716	.7699	.7682	.7671	.7663	.7644
.0007	.7636	.7622	.7607	.7591	.7581	.7574	.7557	.7540	.7521	.7509	.7502	.7481
.0008	.7496	.7480	.7465	.7448	.7438	.7430	.7413	.7394	.7374	.7362	.7354	.7333
.0009	.7366	.7350	.7333	.7316	.7306	.7298	.7279	.7260	.7239	.7227	.7218	.7196
.0010	.7245	.7228	.7211	.7193	.7182	.7174	.7155	.7135	.7114	.7101	.7092	.7069
.0020	.6339	.6319	.6298	.6276	.6262	.6253	.6229	.6204	.6178	.6162	.6151	.6124
.0030	.5722	.5700	.5676	.5652	.5637	.5626	.5600	.5573	.5545	.5527	.5515	.5484
.0040	.5249	.5225	.5200	.5174	.5159	.5147	.5120	.5091	.5061	.5042	.5030	.4998
.0050	.4864	.4839	.4814	.4787	.4771	.4759	.4731	.4701	.4670	.4651	.4638	.4605
.0060	.4541	.4516	.4490	.4462	.4446	.4434	.4405	.4374	.4343	.4323	.4310	.4276
.0070	.4263	.4237	.4210	.4183	.4166	.4154	.4124	.4094	.4062	.4042	.4029	.3995
.0080	.4019	.3993	.3966	.3939	.3922	.3909	.3880	.3849	.3817	.3797	.3784	.3750
.0090	.3803	.3777	.3750	.3722	.3705	.3693	.3663	.3632	.3600	.3581	.3567	.3533
.0100	.3609	.3583	.3556	.3528	.3512	.3499	.3470	.3439	.3407	.3387	.3374	.3340
.0200	.2366	.2342	.2317	.2292	.2276	.2265	.2238	.2210	.2181	.2163	.2151	.2121
.0300	.1711	.1690	.1668	.1646	.1632	.1622	.1599	.1574	.1549	.1533	.1523	.1496
.0400	.1302	.1284	.1265	.1245	.1233	.1224	.1204	.1183	.1161	.1147	.1138	.1115
.0500	.1024	.1007	.0991	.0973	.0963	.0956	.0938	.0919	.0900	.0889	.0881	.0861
.0600	.0824	.0809	.0795	.0779	.0770	.0764	.0748	.0732	.0715	.0705	.0698	.0681
.0700	.0674	.0662	.0649	.0635	.0627	.0622	.0608	.0594	.0579	.0570	.0564	.0549
.0800	.0560	.0548	.0537	.0525	.0518	.0513	.0501	.0488	.0476	.0468	.0463	.0450
.0900	.0470	.0460	.0450	.0439	.0433	.0428	.0418	.0407	.0395	.0389	.0384	.0373
.1000	.0398	.0389	.0380	.0371	.0365	.0361	.0352	.0342	.0332	.0326	.0322	.0312

TABLE 19. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8952	.8942	.8932	.8922	.8911	.8900	.8889	.8877	.8864	.8852	.8838
.0002	.8551	.8538	.8524	.8510	.8496	.8481	.8465	.8449	.8433	.8416	.8398
.0003	.8255	.8239	.8224	.8207	.8190	.8172	.8154	.8135	.8116	.8096	.8074
.0004	.8014	.7996	.7978	.7960	.7941	.7921	.7901	.7880	.7858	.7835	.7812
.0005	.7807	.7788	.7769	.7748	.7728	.7706	.7684	.7661	.7637	.7613	.7587
.0006	.7625	.7604	.7584	.7562	.7540	.7517	.7493	.7469	.7443	.7417	.7390
.0007	.7461	.7439	.7417	.7395	.7371	.7347	.7322	.7296	.7269	.7242	.7213
.0008	.7312	.7289	.7266	.7242	.7218	.7192	.7166	.7139	.7111	.7082	.7052
.0009	.7174	.7150	.7127	.7102	.7076	.7050	.7023	.6994	.6965	.6936	.6904
.0010	.7046	.7022	.6997	.6971	.6945	.6918	.6890	.6860	.6830	.6800	.6767
.0020	.6095	.6065	.6035	.6004	.5972	.5939	.5905	.5869	.5833	.5796	.5756
.0030	.5453	.5421	.5388	.5353	.5318	.5282	.5245	.5207	.5167	.5127	.5085
.0040	.4965	.4931	.4896	.4860	.4823	.4786	.4747	.4707	.4665	.4623	.4579
.0050	.4571	.4536	.4500	.4463	.4426	.4387	.4347	.4306	.4264	.4221	.4176
.0060	.4242	.4206	.4170	.4133	.4094	.4055	.4015	.3973	.3931	.3887	.3842
.0070	.3961	.3924	.3888	.3850	.3812	.3772	.3732	.3690	.3647	.3604	.3559
.0080	.3715	.3679	.3642	.3605	.3566	.3527	.3486	.3445	.3402	.3359	.3314
.0090	.3499	.3462	.3426	.3388	.3350	.3311	.3270	.3229	.3187	.3144	.3099
.0100	.3305	.3269	.3233	.3196	.3157	.3118	.3079	.3037	.2996	.2953	.2909
.0200	.2090	.2057	.2025	.1992	.1959	.1924	.1890	.1854	.1818	.1782	.1744
.0300	.1470	.1442	.1414	.1386	.1358	.1329	.1300	.1270	.1239	.1209	.1178
.0400	.1093	.1069	.1045	.1021	.0997	.0972	.0948	.0923	.0897	.0872	.0846
.0500	.0841	.0821	.0801	.0780	.0759	.0739	.0718	.0696	.0675	.0654	.0632
.0600	.0664	.0647	.0629	.0612	.0594	.0576	.0558	.0540	.0522	.0504	.0486
.0700	.0535	.0519	.0504	.0489	.0474	.0458	.0443	.0427	.0412	.0397	.0381
.0800	.0437	.0423	.0410	.0397	.0384	.0370	.0357	.0344	.0331	.0317	.0304
.0900	.0361	.0349	.0338	.0326	.0315	.0303	.0292	.0280	.0269	.0258	.0246
.1000	.0302	.0291	.0281	.0271	.0261	.0251	.0241	.0231	.0221	.0211	.0201

TABLE 20. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8729	.8721	.8712	.8703	.8698	.8694	.8684	.8673	.8663	.8656	.8651	.8640
.0002	.8252	.8240	.8229	.8217	.8209	.8204	.8191	.8177	.8162	.8154	.8147	.8132
.0003	.7903	.7890	.7876	.7862	.7853	.7847	.7831	.7815	.7798	.7788	.7781	.7763
.0004	.7620	.7606	.7590	.7574	.7565	.7558	.7541	.7523	.7504	.7492	.7485	.7464
.0005	.7380	.7364	.7347	.7330	.7320	.7312	.7294	.7274	.7254	.7241	.7233	.7211
.0006	.7169	.7152	.7134	.7116	.7105	.7097	.7077	.7057	.7035	.7022	.7013	.6990
.0007	.6980	.6962	.6944	.6925	.6913	.6904	.6884	.6862	.6840	.6826	.6816	.6792
.0008	.6809	.6790	.6771	.6751	.6739	.6730	.6709	.6686	.6663	.6648	.6638	.6613
.0009	.6652	.6633	.6613	.6592	.6580	.6570	.6548	.6525	.6500	.6485	.6475	.6449
.0010	.6507	.6487	.6467	.6445	.6432	.6423	.6400	.6376	.6351	.6335	.6325	.6298
.0020	.5446	.5422	.5398	.5373	.5358	.5347	.5320	.5291	.5262	.5244	.5232	.5200
.0030	.4751	.4726	.4700	.4673	.4657	.4645	.4616	.4586	.4555	.4536	.4523	.4489
.0040	.4234	.4208	.4182	.4154	.4137	.4125	.4096	.4065	.4033	.4014	.4000	.3966
.0050	.3826	.3799	.3773	.3745	.3728	.3716	.3686	.3655	.3623	.3604	.3590	.3556
.0060	.3490	.3464	.3438	.3410	.3393	.3381	.3351	.3321	.3289	.3269	.3256	.3222
.0070	.3208	.3182	.3156	.3128	.3112	.3099	.3070	.3040	.3008	.2989	.2976	.2942
.0080	.2966	.2940	.2914	.2887	.2871	.2859	.2830	.2800	.2769	.2750	.2737	.2704
.0090	.2755	.2730	.2704	.2677	.2661	.2649	.2621	.2592	.2561	.2543	.2530	.2498
.0100	.2569	.2545	.2520	.2493	.2477	.2466	.2438	.2409	.2379	.2361	.2349	.2317
.0200	.1463	.1444	.1423	.1402	.1390	.1381	.1359	.1336	.1313	.1299	.1289	.1264
.0300	.0950	.0934	.0918	.0902	.0892	.0885	.0868	.0850	.0832	.0821	.0813	.0794
.0400	.0660	.0648	.0635	.0622	.0614	.0608	.0594	.0580	.0566	.0557	.0552	.0537
.0500	.0479	.0469	.0458	.0448	.0442	.0437	.0426	.0415	.0403	.0397	.0392	.0380
.0600	.0358	.0350	.0342	.0333	.0328	.0324	.0315	.0306	.0297	.0291	.0288	.0278
.0700	.0275	.0268	.0261	.0253	.0249	.0246	.0239	.0232	.0224	.0219	.0216	.0209
.0800	.0214	.0208	.0203	.0197	.0193	.0191	.0185	.0179	.0172	.0169	.0166	.0160
.0900	.0170	.0165	.0160	.0155	.0152	.0150	.0145	.0140	.0135	.0132	.0130	.0124
.1000	.0136	.0132	.0128	.0124	.0121	.0119	.0115	.0111	.0107	.0104	.0102	.0098

TABLE 20. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8628	.8615	.8602	.8589	.8575	.8561	.8546	.8531	.8515	.8499	.8482
.0002	.8116	.8099	.8082	.8064	.8046	.8027	.8008	.7988	.7967	.7945	.7923
.0003	.7744	.7724	.7705	.7684	.7663	.7641	.7618	.7594	.7570	.7545	.7519
.0004	.7444	.7422	.7400	.7377	.7353	.7329	.7304	.7278	.7251	.7223	.7194
.0005	.7189	.7165	.7141	.7117	.7091	.7065	.7038	.7010	.6981	.6951	.6920
.0006	.6966	.6941	.6916	.6889	.6862	.6835	.6806	.6776	.6746	.6714	.6681
.0007	.6767	.6741	.6714	.6687	.6659	.6629	.6599	.6568	.6536	.6503	.6469
.0008	.6587	.6560	.6532	.6504	.6474	.6444	.6413	.6380	.6347	.6313	.6277
.0009	.6422	.6394	.6366	.6336	.6306	.6274	.6242	.6209	.6174	.6139	.6102
.0010	.6270	.6241	.6212	.6182	.6150	.6118	.6085	.6051	.6015	.5979	.5941
.0020	.5168	.5134	.5100	.5065	.5029	.4992	.4953	.4914	.4873	.4832	.4789
.0030	.4455	.4420	.4384	.4347	.4309	.4270	.4230	.4189	.4146	.4103	.4058
.0040	.3932	.3895	.3859	.3821	.3783	.3743	.3703	.3661	.3618	.3575	.3530
.0050	.3521	.3485	.3449	.3411	.3373	.3333	.3293	.3252	.3209	.3166	.3121
.0060	.3188	.3152	.3115	.3078	.3040	.3001	.2962	.2921	.2879	.2837	.2793
.0070	.2908	.2873	.2837	.2801	.2764	.2726	.2687	.2647	.2606	.2565	.2522
.0080	.2671	.2636	.2601	.2565	.2529	.2492	.2454	.2415	.2375	.2335	.2293
.0090	.2465	.2431	.2397	.2362	.2326	.2290	.2253	.2215	.2177	.2138	.2097
.0100	.2285	.2252	.2219	.2185	.2150	.2115	.2079	.2042	.2004	.1966	.1927
.0200	.1240	.1215	.1189	.1164	.1137	.1111	.1084	.1057	.1030	.1003	.0974
.0300	.0776	.0756	.0737	.0717	.0698	.0678	.0658	.0638	.0618	.0598	.0577
.0400	.0522	.0507	.0492	.0477	.0462	.0447	.0432	.0417	.0402	.0387	.0371
.0500	.0369	.0357	.0345	.0333	.0322	.0310	.0298	.0286	.0275	.0263	.0252
.0600	.0269	.0260	.0250	.0241	.0232	.0222	.0213	.0204	.0195	.0186	.0177
.0700	.0201	.0194	.0186	.0179	.0171	.0164	.0157	.0149	.0142	.0135	.0128
.0800	.0154	.0148	.0141	.0135	.0129	.0123	.0118	.0112	.0106	.0101	.0095
.0900	.0119	.0114	.0109	.0104	.0099	.0095	.0090	.0085	.0081	.0076	.0072
.1000	.0094	.0090	.0086	.0081	.0077	.0073	.0070	.0066	.0062	.0058	.0055

TABLE 21. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8343	.8332	.8321	.8309	.8302	.8297	.8285	.8271	.8258	.8249	.8244	.8229
.0002	.7740	.7725	.7711	.7696	.7687	.7680	.7663	.7646	.7628	.7617	.7610	.7590
.0003	.7306	.7290	.7273	.7256	.7245	.7237	.7218	.7199	.7178	.7165	.7157	.7134
.0004	.6960	.6942	.6924	.6905	.6893	.6884	.6863	.6842	.6819	.6805	.6796	.6771
.0005	.6669	.6650	.6630	.6609	.6597	.6587	.6565	.6542	.6518	.6503	.6493	.6466
.0006	.6416	.6396	.6375	.6353	.6340	.6330	.6307	.6282	.6257	.6241	.6230	.6203
.0007	.6192	.6171	.6149	.6126	.6113	.6102	.6078	.6053	.6026	.6010	.5999	.5970
.0008	.5990	.5968	.5946	.5922	.5908	.5898	.5873	.5846	.5819	.5802	.5791	.5761
.0009	.5807	.5784	.5761	.5737	.5723	.5712	.5686	.5659	.5631	.5614	.5602	.5572
.0010	.5639	.5616	.5592	.5567	.5552	.5542	.5515	.5488	.5459	.5441	.5429	.5398
.0020	.4447	.4422	.4396	.4368	.4352	.4339	.4310	.4280	.4248	.4229	.4215	.4182
.0030	.3707	.3681	.3654	.3626	.3609	.3597	.3567	.3537	.3505	.3485	.3472	.3437
.0040	.3179	.3153	.3127	.3100	.3083	.3071	.3042	.3011	.2980	.2961	.2947	.2914
.0050	.2777	.2752	.2726	.2699	.2683	.2671	.2643	.2614	.2583	.2564	.2552	.2519
.0060	.2457	.2433	.2408	.2382	.2367	.2355	.2328	.2299	.2270	.2252	.2240	.2209
.0070	.2196	.2173	.2149	.2124	.2109	.2098	.2071	.2044	.2016	.1998	.1987	.1957
.0080	.1978	.1955	.1932	.1908	.1894	.1883	.1858	.1832	.1805	.1788	.1777	.1749
.0090	.1793	.1771	.1749	.1726	.1712	.1702	.1677	.1652	.1627	.1611	.1600	.1573
.0100	.1634	.1613	.1591	.1569	.1556	.1546	.1523	.1499	.1474	.1459	.1449	.1423
.0200	.0771	.0757	.0743	.0729	.0720	.0714	.0699	.0683	.0667	.0658	.0651	.0635
.0300	.0434	.0424	.0414	.0404	.0399	.0394	.0384	.0374	.0363	.0357	.0352	.0342
.0400	.0267	.0260	.0253	.0246	.0242	.0239	.0232	.0225	.0217	.0213	.0210	.0203
.0500	.0174	.0169	.0164	.0159	.0156	.0154	.0149	.0144	.0138	.0135	.0133	.0128
.0600	.0118	.0115	.0111	.0107	.0105	.0103	.0100	.0096	.0092	.0090	.0088	.0084
.0700	.0083	.0080	.0077	.0074	.0073	.0072	.0069	.0066	.0063	.0061	.0060	.0058
.0800	.0059	.0057	.0055	.0053	.0052	.0051	.0049	.0047	.0045	.0043	.0042	.0040
.0900	.0044	.0042	.0040	.0039	.0038	.0037	.0035	.0034	.0032	.0031	.0030	.0029
.1000	.0032	.0031	.0030	.0029	.0028	.0027	.0026	.0025	.0023	.0023	.0022	.0021

TABLE 21. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Debye-Hückel limiting law*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8213	.8197	.8181	.8164	.8147	.8129	.8110	.8091	.8071	.8051	.8029
.0002	.7570	.7550	.7528	.7506	.7484	.7460	.7436	.7411	.7385	.7359	.7331
.0003	.7111	.7087	.7063	.7038	.7012	.6985	.6957	.6929	.6899	.6869	.6837
.0004	.6746	.6720	.6693	.6666	.6637	.6608	.6578	.6546	.6514	.6481	.6446
.0005	.6440	.6412	.6383	.6354	.6324	.6293	.6260	.6227	.6193	.6158	.6121
.0006	.6175	.6146	.6116	.6085	.6053	.6020	.5987	.5952	.5916	.5879	.5841
.0007	.5941	.5910	.5879	.5847	.5814	.5781	.5746	.5709	.5672	.5634	.5594
.0008	.5731	.5700	.5668	.5635	.5601	.5566	.5530	.5493	.5454	.5415	.5374
.0009	.5541	.5509	.5476	.5442	.5407	.5372	.5335	.5297	.5258	.5218	.5176
.0010	.5367	.5334	.5300	.5266	.5230	.5194	.5157	.5118	.5078	.5037	.4995
.0020	.4147	.4111	.4075	.4037	.3999	.3960	.3919	.3878	.3835	.3792	.3746
.0030	.3403	.3367	.3330	.3293	.3254	.3215	.3175	.3134	.3092	.3049	.3005
.0040	.2880	.2845	.2809	.2773	.2736	.2698	.2659	.2619	.2578	.2537	.2495
.0050	.2487	.2453	.2418	.2383	.2348	.2311	.2274	.2236	.2197	.2158	.2117
.0060	.2177	.2145	.2112	.2078	.2044	.2010	.1974	.1938	.1901	.1864	.1826
.0070	.1927	.1896	.1865	.1833	.1800	.1767	.1734	.1699	.1665	.1630	.1593
.0080	.1720	.1690	.1660	.1630	.1599	.1568	.1536	.1504	.1471	.1438	.1404
.0090	.1546	.1517	.1489	.1460	.1431	.1401	.1371	.1340	.1309	.1278	.1246
.0100	.1397	.1370	.1343	.1316	.1288	.1260	.1231	.1202	.1173	.1144	.1113
.0200	.0618	.0602	.0585	.0568	.0551	.0534	.0517	.0500	.0483	.0466	.0448
.0300	.0331	.0320	.0309	.0298	.0287	.0277	.0266	.0255	.0244	.0234	.0223
.0400	.0195	.0188	.0180	.0173	.0166	.0159	.0152	.0145	.0138	.0131	.0124
.0500	.0123	.0117	.0112	.0107	.0102	.0097	.0092	.0088	.0083	.0078	.0074
.0600	.0081	.0077	.0073	.0070	.0066	.0063	.0059	.0056	.0053	.0049	.0046
.0700	.0055	.0052	.0049	.0047	.0044	.0042	.0039	.0037	.0034	.0032	.0030
.0800	.0038	.0036	.0034	.0032	.0030	.0029	.0027	.0025	.0023	.0022	.0020
.0900	.0027	.0026	.0024	.0023	.0021	.0020	.0019	.0017	.0016	.0015	.0014
.1000	.0020	.0019	.0017	.0016	.0015	.0014	.0013	.0012	.0011	.0011	.0010

TABLE 22. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9885	.9885	.9884	.9883	.9882	.9881	.9881	.9879
.0002	.9843	.9842	.9841	.9840	.9839	.9838	.9837	.9836	.9834	.9833	.9832	.9831
.0003	.9809	.9808	.9806	.9805	.9804	.9803	.9801	.9800	.9798	.9797	.9796	.9794
.0004	.9780	.9779	.9777	.9776	.9774	.9774	.9772	.9770	.9767	.9766	.9765	.9763
.0005	.9755	.9754	.9752	.9750	.9749	.9748	.9746	.9743	.9741	.9739	.9738	.9736
.0006	.9733	.9731	.9729	.9727	.9726	.9725	.9722	.9720	.9717	.9716	.9714	.9711
.0007	.9712	.9710	.9708	.9706	.9704	.9703	.9701	.9698	.9695	.9694	.9692	.9689
.0008	.9693	.9691	.9689	.9687	.9685	.9684	.9681	.9678	.9675	.9673	.9672	.9669
.0009	.9676	.9673	.9671	.9668	.9667	.9666	.9663	.9660	.9656	.9655	.9653	.9650
.0010	.9659	.9656	.9654	.9651	.9650	.9648	.9645	.9642	.9639	.9637	.9635	.9632
.0020	.9527	.9524	.9520	.9516	.9514	.9512	.9508	.9504	.9499	.9496	.9494	.9489
.0030	.9429	.9425	.9421	.9416	.9414	.9412	.9407	.9401	.9396	.9392	.9390	.9384
.0040	.9349	.9344	.9339	.9334	.9331	.9329	.9323	.9317	.9311	.9307	.9305	.9298
.0050	.9279	.9274	.9269	.9264	.9260	.9258	.9252	.9245	.9238	.9234	.9231	.9223
.0060	.9218	.9213	.9207	.9201	.9197	.9195	.9188	.9181	.9173	.9169	.9166	.9157
.0070	.9163	.9157	.9151	.9145	.9141	.9138	.9131	.9123	.9115	.9110	.9107	.9098
.0080	.9112	.9106	.9100	.9093	.9089	.9086	.9078	.9070	.9062	.9057	.9053	.9044
.0090	.9065	.9059	.9052	.9045	.9041	.9038	.9030	.9021	.9012	.9007	.9003	.8993
.0100	.9022	.9015	.9008	.9001	.8996	.8993	.8984	.8976	.8966	.8961	.8957	.8947
.0200	.8691	.8682	.8673	.8663	.8657	.8653	.8642	.8631	.8618	.8611	.8606	.8592
.0300	.8460	.8450	.8440	.8429	.8421	.8416	.8404	.8391	.8376	.8368	.8362	.8346
.0400	.8280	.8269	.8257	.8245	.8237	.8231	.8217	.8203	.8187	.8178	.8171	.8154
.0500	.8131	.8119	.8106	.8093	.8084	.8078	.8063	.8048	.8031	.8021	.8013	.7995
.0600	.8003	.7990	.7977	.7963	.7954	.7947	.7931	.7915	.7897	.7886	.7879	.7859
.0700	.7891	.7877	.7863	.7848	.7839	.7832	.7816	.7798	.7780	.7768	.7760	.7740
.0800	.7791	.7777	.7762	.7747	.7737	.7730	.7713	.7695	.7675	.7663	.7655	.7634
.0900	.7700	.7686	.7671	.7655	.7645	.7638	.7620	.7601	.7581	.7569	.7560	.7538
.1000	.7618	.7603	.7588	.7571	.7561	.7553	.7535	.7516	.7495	.7483	.7474	.7451

TABLE 22. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9878	.9877	.9876	.9874	.9873	.9871	.9869	.9868	.9866	.9864	.9862
.0002	.9829	.9827	.9825	.9823	.9821	.9819	.9817	.9814	.9812	.9809	.9806
.0003	.9792	.9789	.9787	.9784	.9782	.9779	.9776	.9774	.9771	.9767	.9764
.0004	.9760	.9758	.9755	.9752	.9749	.9746	.9743	.9740	.9736	.9733	.9729
.0005	.9733	.9730	.9727	.9724	.9721	.9717	.9714	.9710	.9706	.9702	.9698
.0006	.9708	.9705	.9702	.9699	.9695	.9691	.9687	.9683	.9679	.9675	.9670
.0007	.9686	.9683	.9679	.9675	.9672	.9668	.9664	.9659	.9655	.9650	.9645
.0008	.9665	.9662	.9658	.9654	.9650	.9646	.9641	.9637	.9632	.9627	.9622
.0009	.9646	.9642	.9638	.9634	.9630	.9625	.9621	.9616	.9611	.9606	.9600
.0010	.9628	.9624	.9620	.9615	.9611	.9606	.9601	.9596	.9591	.9585	.9579
.0020	.9484	.9478	.9473	.9467	.9461	.9454	.9447	.9440	.9433	.9426	.9418
.0030	.9378	.9371	.9364	.9357	.9350	.9342	.9334	.9325	.9317	.9308	.9298
.0040	.9290	.9283	.9275	.9267	.9258	.9250	.9241	.9231	.9221	.9211	.9200
.0050	.9215	.9207	.9198	.9189	.9180	.9170	.9160	.9150	.9139	.9128	.9116
.0060	.9149	.9140	.9131	.9121	.9111	.9100	.9090	.9078	.9066	.9054	.9041
.0070	.9089	.9079	.9069	.9059	.9048	.9037	.9026	.9013	.9001	.8988	.8974
.0080	.9034	.9024	.9013	.9002	.8991	.8979	.8967	.8954	.8941	.8928	.8913
.0090	.8983	.8973	.8962	.8950	.8938	.8926	.8913	.8900	.8886	.8872	.8856
.0100	.8936	.8925	.8913	.8902	.8889	.8876	.8863	.8849	.8834	.8820	.8804
.0200	.8579	.8564	.8549	.8533	.8517	.8500	.8483	.8465	.8446	.8427	.8406
.0300	.8330	.8313	.8296	.8278	.8260	.8240	.8220	.8199	.8177	.8155	.8131
.0400	.8136	.8118	.8099	.8079	.8058	.8037	.8015	.7991	.7967	.7943	.7917
.0500	.7976	.7956	.7936	.7914	.7892	.7869	.7845	.7820	.7795	.7768	.7740
.0600	.7839	.7818	.7796	.7774	.7750	.7726	.7701	.7674	.7647	.7620	.7590
.0700	.7719	.7697	.7674	.7651	.7626	.7601	.7574	.7547	.7518	.7489	.7458
.0800	.7612	.7589	.7566	.7541	.7516	.7489	.7462	.7433	.7404	.7374	.7342
.0900	.7516	.7492	.7468	.7442	.7416	.7389	.7361	.7331	.7301	.7270	.7237
.1000	.7428	.7404	.7379	.7353	.7326	.7298	.7269	.7238	.7207	.7175	.7141

TABLE 23. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9778	.9777	.9775	.9773	.9772	.9771	.9769	.9767	.9765	.9764	.9763	.9760
.0002	.9689	.9687	.9685	.9682	.9681	.9680	.9677	.9674	.9671	.9669	.9668	.9664
.0003	.9622	.9619	.9616	.9613	.9611	.9610	.9607	.9603	.9600	.9597	.9596	.9592
.0004	.9566	.9563	.9559	.9556	.9554	.9552	.9549	.9545	.9540	.9538	.9536	.9531
.0005	.9517	.9513	.9510	.9506	.9504	.9502	.9498	.9493	.9489	.9486	.9484	.9478
.0006	.9473	.9469	.9465	.9461	.9459	.9457	.9452	.9447	.9442	.9439	.9437	.9431
.0007	.9433	.9429	.9425	.9421	.9418	.9416	.9411	.9406	.9400	.9397	.9394	.9388
.0008	.9396	.9392	.9387	.9383	.9380	.9378	.9373	.9367	.9361	.9358	.9355	.9349
.0009	.9362	.9357	.9353	.9348	.9345	.9342	.9337	.9331	.9325	.9321	.9318	.9312
.0010	.9329	.9325	.9320	.9315	.9311	.9309	.9303	.9297	.9291	.9287	.9284	.9277
.0020	.9076	.9070	.9063	.9056	.9052	.9049	.9041	.9032	.9024	.9018	.9014	.9005
.0030	.8890	.8883	.8875	.8867	.8862	.8858	.8848	.8839	.8828	.8822	.8817	.8806
.0040	.8740	.8731	.8722	.8713	.8707	.8703	.8692	.8681	.8670	.8662	.8657	.8644
.0050	.8611	.8602	.8592	.8582	.8575	.8571	.8559	.8547	.8534	.8526	.8521	.8507
.0060	.8497	.8488	.8477	.8466	.8459	.8454	.8442	.8429	.8415	.8407	.8401	.8386
.0070	.8396	.8385	.8374	.8363	.8355	.8350	.8337	.8323	.8308	.8300	.8293	.8277
.0080	.8303	.8292	.8281	.8268	.8261	.8255	.8241	.8227	.8211	.8202	.8196	.8179
.0090	.8218	.8207	.8195	.8182	.8174	.8168	.8153	.8139	.8122	.8113	.8106	.8088
.0100	.8139	.8127	.8115	.8101	.8093	.8087	.8072	.8056	.8040	.8030	.8022	.8004
.0200	.7553	.7538	.7522	.7506	.7495	.7487	.7468	.7449	.7428	.7415	.7406	.7383
.0300	.7158	.7141	.7123	.7104	.7092	.7083	.7062	.7040	.7016	.7002	.6992	.6966
.0400	.6856	.6838	.6818	.6798	.6785	.6775	.6753	.6729	.6703	.6688	.6677	.6649
.0500	.6611	.6591	.6571	.6549	.6536	.6526	.6502	.6476	.6449	.6433	.6422	.6392
.0600	.6404	.6384	.6363	.6340	.6326	.6316	.6290	.6264	.6236	.6219	.6207	.6176
.0700	.6226	.6205	.6183	.6160	.6145	.6134	.6108	.6081	.6052	.6035	.6022	.5991
.0800	.6069	.6048	.6025	.6001	.5986	.5975	.5948	.5921	.5891	.5873	.5860	.5828
.0900	.5929	.5907	.5884	.5860	.5844	.5833	.5806	.5778	.5747	.5729	.5716	.5683
.1000	.5803	.5781	.5757	.5733	.5717	.5705	.5678	.5649	.5618	.5599	.5586	.5552

TABLE 23. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9758	.9755	.9753	.9750	.9747	.9744	.9740	.9737	.9734	.9730	.9726
.0002	.9661	.9657	.9653	.9649	.9645	.9641	.9636	.9632	.9627	.9622	.9617
.0003	.9587	.9583	.9578	.9574	.9569	.9563	.9558	.9552	.9546	.9540	.9534
.0004	.9526	.9521	.9516	.9510	.9505	.9499	.9493	.9486	.9479	.9473	.9465
.0005	.9473	.9467	.9462	.9455	.9449	.9443	.9436	.9428	.9421	.9413	.9405
.0006	.9425	.9419	.9413	.9406	.9399	.9392	.9385	.9377	.9369	.9361	.9352
.0007	.9382	.9375	.9369	.9361	.9354	.9346	.9338	.9330	.9321	.9312	.9303
.0008	.9342	.9335	.9328	.9320	.9312	.9304	.9296	.9287	.9277	.9268	.9258
.0009	.9305	.9297	.9289	.9281	.9273	.9265	.9256	.9246	.9237	.9227	.9216
.0010	.9269	.9262	.9254	.9245	.9237	.9228	.9218	.9208	.9198	.9188	.9177
.0020	.8995	.8984	.8973	.8962	.8950	.8938	.8925	.8912	.8898	.8884	.8869
.0030	.8794	.8781	.8769	.8755	.8741	.8727	.8712	.8696	.8680	.8663	.8645
.0040	.8631	.8617	.8603	.8587	.8572	.8556	.8539	.8521	.8503	.8484	.8464
.0050	.8492	.8477	.8461	.8445	.8428	.8410	.8391	.8372	.8352	.8332	.8310
.0060	.8370	.8354	.8337	.8319	.8301	.8282	.8262	.8241	.8220	.8198	.8175
.0070	.8261	.8243	.8225	.8207	.8187	.8167	.8146	.8124	.8102	.8079	.8054
.0080	.8161	.8143	.8124	.8104	.8084	.8063	.8041	.8018	.7994	.7970	.7944
.0090	.8070	.8051	.8031	.8011	.7990	.7967	.7944	.7920	.7896	.7871	.7844
.0100	.7985	.7965	.7945	.7924	.7902	.7879	.7855	.7830	.7805	.7778	.7750
.0200	.7359	.7334	.7309	.7282	.7255	.7226	.7196	.7165	.7133	.7101	.7066
.0300	.6939	.6911	.6883	.6853	.6822	.6790	.6756	.6722	.6686	.6650	.6611
.0400	.6620	.6590	.6559	.6527	.6494	.6459	.6423	.6386	.6348	.6309	.6268
.0500	.6362	.6330	.6297	.6264	.6229	.6192	.6155	.6116	.6076	.6035	.5991
.0600	.6145	.6112	.6078	.6043	.6007	.5969	.5930	.5889	.5848	.5806	.5761
.0700	.5958	.5924	.5889	.5853	.5816	.5777	.5737	.5695	.5653	.5609	.5563
.0800	.5795	.5759	.5724	.5687	.5649	.5609	.5568	.5525	.5482	.5437	.5390
.0900	.5649	.5613	.5577	.5539	.5500	.5460	.5418	.5374	.5330	.5285	.5237
.1000	.5518	.5481	.5445	.5406	.5367	.5325	.5283	.5239	.5194	.5148	.5099

TABLE 24. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9669	.9667	.9664	.9662	.9660	.9659	.9656	.9653	.9650	.9648	.9646	.9643
.0002	.9537	.9534	.9531	.9527	.9525	.9523	.9519	.9515	.9510	.9508	.9506	.9501
.0003	.9438	.9434	.9430	.9426	.9423	.9421	.9416	.9411	.9405	.9402	.9400	.9394
.0004	.9356	.9351	.9346	.9342	.9338	.9336	.9331	.9325	.9318	.9315	.9312	.9305
.0005	.9284	.9279	.9274	.9268	.9265	.9262	.9256	.9250	.9243	.9239	.9236	.9228
.0006	.9220	.9215	.9209	.9203	.9199	.9196	.9190	.9183	.9175	.9171	.9167	.9159
.0007	.9162	.9156	.9150	.9143	.9139	.9137	.9129	.9122	.9114	.9109	.9105	.9097
.0008	.9108	.9102	.9095	.9089	.9084	.9081	.9074	.9066	.9057	.9052	.9048	.9039
.0009	.9058	.9052	.9045	.9038	.9033	.9030	.9022	.9014	.9004	.8999	.8995	.8985
.0010	.9011	.9004	.8997	.8990	.8985	.8982	.8973	.8965	.8955	.8949	.8945	.8935
.0020	.8647	.8638	.8628	.8618	.8612	.8607	.8596	.8584	.8572	.8564	.8559	.8545
.0030	.8383	.8372	.8361	.8349	.8342	.8337	.8323	.8310	.8295	.8286	.8280	.8263
.0040	.8170	.8159	.8146	.8133	.8125	.8119	.8104	.8089	.8072	.8062	.8055	.8037
.0050	.7990	.7978	.7964	.7950	.7941	.7934	.7918	.7902	.7884	.7873	.7866	.7846
.0060	.7833	.7819	.7805	.7790	.7780	.7773	.7756	.7739	.7720	.7708	.7700	.7679
.0070	.7693	.7679	.7663	.7647	.7637	.7630	.7612	.7593	.7573	.7561	.7553	.7531
.0080	.7566	.7551	.7535	.7519	.7508	.7500	.7482	.7462	.7441	.7428	.7419	.7396
.0090	.7450	.7434	.7418	.7401	.7390	.7382	.7362	.7342	.7320	.7307	.7298	.7274
.0100	.7343	.7327	.7310	.7292	.7281	.7272	.7252	.7231	.7209	.7195	.7186	.7161
.0200	.6564	.6545	.6524	.6502	.6488	.6479	.6454	.6429	.6401	.6385	.6373	.6344
.0300	.6056	.6034	.6012	.5988	.5973	.5962	.5935	.5907	.5877	.5859	.5847	.5814
.0400	.5677	.5654	.5630	.5605	.5589	.5577	.5549	.5520	.5488	.5469	.5456	.5421
.0500	.5375	.5351	.5326	.5300	.5284	.5272	.5242	.5212	.5179	.5160	.5146	.5110
.0600	.5125	.5101	.5075	.5048	.5031	.5019	.4989	.4958	.4924	.4904	.4890	.4854
.0700	.4913	.4888	.4862	.4834	.4817	.4805	.4774	.4742	.4708	.4688	.4674	.4637
.0800	.4728	.4703	.4677	.4649	.4631	.4619	.4588	.4556	.4521	.4501	.4486	.4449
.0900	.4566	.4540	.4514	.4486	.4468	.4455	.4424	.4392	.4357	.4336	.4322	.4284
.1000	.4421	.4395	.4369	.4340	.4322	.4310	.4278	.4246	.4211	.4190	.4175	.4137

TABLE 24. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Güntelberg*—Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9639	.9635	.9631	.9627	.9623	.9618	.9613	.9608	.9603	.9598	.9592
.0002	.9496	.9490	.9484	.9479	.9473	.9466	.9460	.9453	.9446	.9438	.9431
.0003	.9388	.9381	.9374	.9367	.9360	.9352	.9344	.9336	.9327	.9319	.9309
.0004	.9298	.9290	.9283	.9275	.9266	.9258	.9249	.9239	.9229	.9219	.9209
.0005	.9220	.9212	.9203	.9194	.9185	.9176	.9166	.9155	.9144	.9133	.9121
.0006	.9151	.9142	.9132	.9123	.9113	.9102	.9091	.9080	.9068	.9056	.9044
.0007	.9088	.9078	.9068	.9058	.9047	.9036	.9024	.9012	.8999	.8987	.8973
.0008	.9029	.9019	.9009	.8998	.8986	.8974	.8962	.8949	.8936	.8922	.8908
.0009	.8975	.8964	.8953	.8942	.8930	.8917	.8904	.8891	.8877	.8863	.8847
.0010	.8924	.8913	.8902	.8890	.8877	.8864	.8850	.8836	.8822	.8807	.8791
.0020	.8531	.8516	.8500	.8484	.8468	.8450	.8432	.8413	.8394	.8374	.8353
.0030	.8247	.8229	.8211	.8192	.8173	.8152	.8131	.8109	.8086	.8063	.8038
.0040	.8019	.7999	.7979	.7958	.7936	.7914	.7890	.7866	.7840	.7815	.7787
.0050	.7826	.7804	.7783	.7760	.7737	.7712	.7687	.7660	.7633	.7605	.7575
.0060	.7658	.7635	.7612	.7588	.7563	.7537	.7510	.7481	.7452	.7423	.7391
.0070	.7508	.7484	.7460	.7434	.7408	.7381	.7352	.7323	.7292	.7261	.7228
.0080	.7373	.7348	.7322	.7296	.7269	.7240	.7210	.7179	.7148	.7115	.7081
.0090	.7249	.7223	.7197	.7170	.7141	.7112	.7081	.7049	.7016	.6982	.6947
.0100	.7136	.7109	.7082	.7053	.7024	.6993	.6962	.6929	.6895	.6860	.6823
.0200	.6313	.6281	.6248	.6214	.6179	.6142	.6104	.6065	.6024	.5983	.5939
.0300	.5781	.5745	.5710	.5673	.5635	.5595	.5554	.5511	.5467	.5423	.5375
.0400	.5386	.5349	.5312	.5273	.5233	.5191	.5148	.5103	.5058	.5011	.4962
.0500	.5074	.5036	.4997	.4957	.4916	.4873	.4829	.4783	.4736	.4688	.4638
.0600	.4817	.4778	.4739	.4698	.4656	.4612	.4567	.4520	.4472	.4424	.4372
.0700	.4599	.4560	.4520	.4478	.4435	.4391	.4345	.4298	.4250	.4201	.4149
.0800	.4411	.4371	.4330	.4288	.4246	.4201	.4155	.4107	.4058	.4009	.3957
.0900	.4246	.4205	.4165	.4122	.4079	.4034	.3988	.3940	.3891	.3842	.3790
.1000	.4099	.4058	.4017	.3975	.3932	.3886	.3840	.3792	.3743	.3694	.3641

TABLE 25. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9561	.9558	.9555	.9552	.9550	.9548	.9544	.9540	.9536	.9533	.9531	.9527
.0002	.9388	.9384	.9379	.9375	.9371	.9369	.9364	.9359	.9352	.9349	.9346	.9340
.0003	.9258	.9253	.9247	.9242	.9238	.9235	.9229	.9222	.9215	.9211	.9208	.9200
.0004	.9150	.9144	.9138	.9132	.9128	.9125	.9117	.9110	.9102	.9097	.9093	.9084
.0005	.9057	.9050	.9044	.9037	.9032	.9029	.9021	.9012	.9003	.8998	.8994	.8984
.0006	.8974	.8967	.8959	.8952	.8947	.8943	.8935	.8925	.8916	.8910	.8906	.8895
.0007	.8898	.8891	.8883	.8875	.8869	.8866	.8856	.8847	.8836	.8830	.8825	.8814
.0008	.8829	.8821	.8812	.8804	.8798	.8794	.8784	.8774	.8763	.8756	.8752	.8740
.0009	.8764	.8756	.8747	.8738	.8732	.8728	.8718	.8707	.8695	.8688	.8683	.8670
.0010	.8704	.8695	.8686	.8676	.8670	.8666	.8655	.8644	.8632	.8624	.8619	.8606
.0020	.8237	.8226	.8214	.8201	.8193	.8188	.8173	.8159	.8142	.8133	.8126	.8109
.0030	.7904	.7891	.7877	.7862	.7853	.7846	.7830	.7812	.7794	.7782	.7775	.7754
.0040	.7638	.7623	.7608	.7592	.7581	.7574	.7556	.7537	.7516	.7504	.7495	.7473
.0050	.7415	.7399	.7382	.7365	.7353	.7345	.7326	.7305	.7283	.7270	.7261	.7236
.0060	.7221	.7204	.7186	.7168	.7156	.7147	.7127	.7105	.7081	.7067	.7058	.7032
.0070	.7049	.7031	.7013	.6993	.6981	.6972	.6950	.6928	.6903	.6888	.6878	.6851
.0080	.6894	.6876	.6857	.6837	.6824	.6815	.6792	.6768	.6743	.6728	.6717	.6689
.0090	.6754	.6735	.6715	.6694	.6681	.6671	.6648	.6624	.6597	.6581	.6570	.6542
.0100	.6625	.6605	.6585	.6563	.6550	.6540	.6516	.6491	.6464	.6447	.6436	.6406
.0200	.5705	.5682	.5658	.5633	.5617	.5606	.5578	.5548	.5517	.5498	.5485	.5451
.0300	.5124	.5099	.5074	.5047	.5030	.5017	.4987	.4956	.4923	.4903	.4889	.4852
.0400	.4700	.4675	.4649	.4621	.4603	.4591	.4560	.4528	.4493	.4472	.4458	.4420
.0500	.4370	.4345	.4318	.4289	.4271	.4258	.4227	.4194	.4159	.4138	.4124	.4086
.0600	.4102	.4076	.4048	.4020	.4002	.3989	.3957	.3924	.3889	.3868	.3853	.3815
.0700	.3876	.3850	.3823	.3794	.3776	.3763	.3731	.3698	.3663	.3642	.3627	.3589
.0800	.3684	.3657	.3630	.3601	.3583	.3570	.3538	.3506	.3470	.3449	.3434	.3396
.0900	.3516	.3490	.3462	.3434	.3416	.3403	.3371	.3338	.3303	.3282	.3267	.3229
.1000	.3368	.3342	.3315	.3286	.3268	.3255	.3224	.3191	.3156	.3135	.3120	.3083

TABLE 25. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9522	.9517	.9511	.9506	.9500	.9494	.9488	.9481	.9474	.9467	.9460
.0002	.9333	.9326	.9319	.9311	.9303	.9295	.9286	.9277	.9268	.9258	.9248
.0003	.9192	.9183	.9174	.9165	.9156	.9146	.9135	.9124	.9113	.9102	.9090
.0004	.9075	.9065	.9055	.9045	.9034	.9023	.9011	.8999	.8986	.8973	.8959
.0005	.8974	.8963	.8952	.8941	.8929	.8916	.8903	.8890	.8876	.8861	.8846
.0006	.8884	.8872	.8860	.8848	.8835	.8821	.8807	.8793	.8778	.8762	.8746
.0007	.8802	.8790	.8777	.8764	.8750	.8735	.8720	.8705	.8689	.8672	.8654
.0008	.8727	.8714	.8700	.8686	.8672	.8656	.8641	.8624	.8607	.8590	.8571
.0009	.8657	.8644	.8629	.8615	.8599	.8583	.8567	.8549	.8531	.8513	.8493
.0010	.8592	.8578	.8563	.8547	.8532	.8515	.8497	.8479	.8461	.8441	.8421
.0020	.8091	.8072	.8052	.8032	.8011	.7989	.7966	.7942	.7918	.7893	.7866
.0030	.7733	.7711	.7689	.7665	.7641	.7616	.7589	.7562	.7534	.7505	.7474
.0040	.7450	.7425	.7400	.7374	.7348	.7320	.7291	.7261	.7230	.7198	.7164
.0050	.7212	.7185	.7159	.7131	.7102	.7072	.7041	.7009	.6976	.6942	.6906
.0060	.7006	.6978	.6950	.6921	.6890	.6859	.6826	.6792	.6757	.6721	.6683
.0070	.6824	.6795	.6766	.6735	.6703	.6670	.6636	.6600	.6564	.6526	.6487
.0080	.6661	.6631	.6600	.6568	.6535	.6501	.6466	.6429	.6391	.6352	.6311
.0090	.6512	.6481	.6450	.6417	.6383	.6348	.6311	.6273	.6234	.6195	.6152
.0100	.6376	.6345	.6312	.6278	.6244	.6207	.6170	.6131	.6091	.6050	.6007
.0200	.5416	.5379	.5342	.5303	.5263	.5221	.5178	.5134	.5088	.5042	.4993
.0300	.4816	.4776	.4737	.4696	.4654	.4610	.4565	.4518	.4470	.4422	.4371
.0400	.4383	.4342	.4302	.4260	.4217	.4172	.4126	.4078	.4030	.3980	.3928
.0500	.4047	.4007	.3966	.3923	.3880	.3835	.3788	.3740	.3691	.3642	.3590
.0600	.3776	.3735	.3694	.3652	.3608	.3563	.3517	.3469	.3420	.3371	.3319
.0700	.3550	.3509	.3468	.3426	.3383	.3337	.3291	.3243	.3195	.3146	.3094
.0800	.3358	.3317	.3276	.3234	.3191	.3146	.3100	.3053	.3005	.2956	.2905
.0900	.3191	.3151	.3110	.3068	.3025	.2981	.2935	.2888	.2841	.2793	.2742
.1000	.3045	.3005	.2964	.2923	.2880	.2836	.2791	.2745	.2698	.2650	.2600

TABLE 26. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9349	.9345	.9340	.9335	.9332	.9330	.9324	.9318	.9312	.9308	.9305	.9298
.0002	.9096	.9090	.9083	.9077	.9072	.9069	.9061	.9053	.9045	.9039	.9036	.9026
.0003	.8908	.8900	.8893	.8884	.8879	.8875	.8866	.8857	.8846	.8840	.8836	.8824
.0004	.8753	.8744	.8736	.8726	.8720	.8716	.8706	.8695	.8683	.8676	.8671	.8658
.0005	.8619	.8610	.8600	.8590	.8584	.8579	.8568	.8556	.8543	.8535	.8530	.8516
.0006	.8501	.8491	.8480	.8469	.8462	.8457	.8445	.8432	.8418	.8410	.8404	.8389
.0007	.8393	.8383	.8372	.8360	.8353	.8348	.8334	.8321	.8306	.8297	.8291	.8275
.0008	.8295	.8284	.8273	.8260	.8253	.8247	.8233	.8219	.8203	.8194	.8187	.8170
.0009	.8205	.8193	.8181	.8168	.8160	.8154	.8139	.8124	.8108	.8098	.8091	.8074
.0010	.8120	.8108	.8095	.8082	.8073	.8067	.8052	.8036	.8019	.8009	.8002	.7983
.0020	.7476	.7461	.7445	.7427	.7416	.7408	.7389	.7369	.7347	.7334	.7325	.7301
.0030	.7027	.7009	.6991	.6971	.6959	.6950	.6928	.6905	.6880	.6866	.6855	.6828
.0040	.6675	.6656	.6636	.6615	.6601	.6591	.6568	.6543	.6516	.6500	.6489	.6460
.0050	.6384	.6364	.6343	.6320	.6306	.6295	.6270	.6244	.6216	.6199	.6187	.6156
.0060	.6136	.6114	.6092	.6068	.6053	.6043	.6016	.5989	.5959	.5941	.5929	.5897
.0070	.5918	.5896	.5873	.5848	.5833	.5822	.5794	.5766	.5735	.5717	.5704	.5671
.0080	.5725	.5702	.5678	.5653	.5637	.5625	.5597	.5568	.5537	.5518	.5505	.5471
.0090	.5550	.5527	.5503	.5477	.5461	.5449	.5420	.5391	.5358	.5339	.5326	.5291
.0100	.5392	.5368	.5343	.5317	.5301	.5289	.5260	.5229	.5196	.5177	.5163	.5128
.0200	.4309	.4283	.4256	.4228	.4210	.4197	.4166	.4133	.4098	.4077	.4062	.4024
.0300	.3667	.3641	.3614	.3585	.3567	.3554	.3522	.3489	.3454	.3433	.3418	.3380
.0400	.3223	.3197	.3170	.3141	.3123	.3110	.3079	.3046	.3012	.2991	.2976	.2939
.0500	.2889	.2864	.2837	.2809	.2792	.2779	.2748	.2716	.2682	.2662	.2648	.2612
.0600	.2627	.2602	.2576	.2549	.2531	.2519	.2489	.2458	.2425	.2405	.2392	.2356
.0700	.2413	.2389	.2364	.2337	.2320	.2308	.2279	.2249	.2217	.2198	.2184	.2150
.0800	.2236	.2212	.2187	.2161	.2145	.2133	.2105	.2076	.2044	.2026	.2013	.1979
.0900	.2085	.2062	.2037	.2012	.1996	.1985	.1957	.1929	.1898	.1880	.1868	.1835
.1000	.1955	.1932	.1908	.1884	.1868	.1857	.1830	.1803	.1773	.1755	.1743	.1712

TABLE 26. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9291	.9284	.9276	.9268	.9259	.9251	.9241	.9232	.9222	.9212	.9201
.0002	.9016	.9006	.8995	.8984	.8973	.8961	.8948	.8935	.8922	.8908	.8893
.0003	.8813	.8800	.8788	.8774	.8761	.8746	.8731	.8716	.8700	.8684	.8666
.0004	.8645	.8631	.8617	.8602	.8587	.8570	.8554	.8536	.8518	.8500	.8480
.0005	.8501	.8486	.8470	.8454	.8437	.8419	.8401	.8382	.8362	.8342	.8320
.0006	.8374	.8357	.8340	.8322	.8304	.8285	.8266	.8245	.8224	.8202	.8179
.0007	.8258	.8241	.8223	.8204	.8185	.8164	.8144	.8121	.8099	.8076	.8051
.0008	.8153	.8134	.8115	.8096	.8075	.8054	.8032	.8009	.7985	.7961	.7935
.0009	.8055	.8036	.8016	.7996	.7974	.7952	.7929	.7905	.7880	.7855	.7828
.0010	.7965	.7944	.7924	.7902	.7880	.7857	.7833	.7808	.7782	.7756	.7728
.0020	.7277	.7252	.7225	.7198	.7170	.7140	.7110	.7078	.7046	.7012	.6977
.0030	.6801	.6772	.6742	.6711	.6679	.6646	.6612	.6576	.6539	.6502	.6462
.0040	.6430	.6398	.6366	.6333	.6299	.6262	.6226	.6187	.6147	.6107	.6064
.0050	.6124	.6091	.6057	.6022	.5986	.5948	.5909	.5868	.5826	.5784	.5739
.0060	.5864	.5829	.5794	.5757	.5720	.5680	.5640	.5597	.5554	.5510	.5463
.0070	.5637	.5601	.5565	.5527	.5488	.5447	.5406	.5362	.5318	.5272	.5224
.0080	.5436	.5399	.5362	.5323	.5283	.5242	.5199	.5154	.5109	.5063	.5014
.0090	.5255	.5218	.5180	.5140	.5100	.5057	.5014	.4969	.4922	.4875	.4826
.0100	.5092	.5054	.5015	.4975	.4934	.4891	.4847	.4801	.4754	.4706	.4656
.0200	.3986	.3945	.3904	.3861	.3818	.3773	.3726	.3678	.3629	.3580	.3528
.0300	.3342	.3301	.3260	.3218	.3175	.3130	.3084	.3037	.2989	.2941	.2889
.0400	.2901	.2862	.2822	.2780	.2738	.2695	.2650	.2604	.2558	.2511	.2462
.0500	.2575	.2536	.2497	.2457	.2417	.2374	.2332	.2287	.2243	.2198	.2151
.0600	.2321	.2283	.2245	.2207	.2167	.2127	.2085	.2043	.2000	.1957	.1912
.0700	.2115	.2079	.2043	.2005	.1967	.1928	.1888	.1847	.1806	.1765	.1721
.0800	.1946	.1910	.1875	.1839	.1803	.1764	.1726	.1687	.1647	.1607	.1566
.0900	.1803	.1768	.1734	.1699	.1664	.1627	.1590	.1552	.1514	.1476	.1436
.1000	.1680	.1647	.1614	.1580	.1546	.1510	.1475	.1438	.1401	.1364	.1326

TABLE 27. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9142	.9136	.9130	.9124	.9119	.9116	.9109	.9101	.9093	.9088	.9085	.9076
.0002	.8813	.8805	.8797	.8788	.8782	.8778	.8769	.8758	.8747	.8740	.8735	.8723
.0003	.8571	.8561	.8551	.8541	.8534	.8529	.8518	.8505	.8492	.8484	.8478	.8464
.0004	.8372	.8362	.8351	.8339	.8331	.8326	.8313	.8299	.8284	.8275	.8269	.8252
.0005	.8203	.8191	.8179	.8166	.8158	.8152	.8137	.8122	.8106	.8096	.8089	.8071
.0006	.8053	.8040	.8027	.8013	.8004	.7998	.7983	.7966	.7949	.7938	.7931	.7912
.0007	.7918	.7904	.7890	.7876	.7867	.7860	.7843	.7826	.7808	.7797	.7789	.7769
.0008	.7794	.7781	.7766	.7751	.7741	.7734	.7717	.7699	.7679	.7667	.7659	.7638
.0009	.7681	.7666	.7651	.7635	.7625	.7618	.7600	.7581	.7561	.7548	.7540	.7518
.0010	.7575	.7560	.7545	.7528	.7517	.7510	.7491	.7472	.7451	.7438	.7429	.7406
.0020	.6785	.6767	.6747	.6726	.6713	.6704	.6680	.6656	.6630	.6614	.6603	.6575
.0030	.6247	.6226	.6204	.6181	.6167	.6156	.6130	.6103	.6074	.6057	.6045	.6013
.0040	.5834	.5812	.5788	.5763	.5748	.5736	.5709	.5680	.5649	.5631	.5618	.5584
.0050	.5498	.5474	.5450	.5424	.5407	.5396	.5367	.5337	.5304	.5285	.5272	.5236
.0060	.5214	.5190	.5164	.5138	.5121	.5109	.5079	.5048	.5015	.4995	.4981	.4945
.0070	.4969	.4944	.4918	.4891	.4873	.4861	.4831	.4799	.4765	.4745	.4731	.4694
.0080	.4753	.4728	.4702	.4674	.4656	.4644	.4613	.4581	.4547	.4526	.4512	.4474
.0090	.4561	.4536	.4509	.4481	.4463	.4451	.4419	.4387	.4352	.4331	.4317	.4279
.0100	.4389	.4363	.4336	.4308	.4290	.4277	.4245	.4213	.4178	.4157	.4142	.4104
.0200	.3255	.3229	.3202	.3173	.3155	.3142	.3111	.3079	.3044	.3023	.3008	.2971
.0300	.2625	.2600	.2574	.2547	.2530	.2517	.2488	.2457	.2423	.2404	.2390	.2355
.0400	.2209	.2186	.2161	.2135	.2119	.2107	.2079	.2050	.2019	.2000	.1987	.1954
.0500	.1910	.1888	.1864	.1840	.1824	.1813	.1787	.1759	.1730	.1713	.1700	.1669
.0600	.1682	.1661	.1639	.1616	.1601	.1591	.1566	.1540	.1512	.1496	.1485	.1455
.0700	.1503	.1482	.1461	.1440	.1426	.1416	.1392	.1368	.1342	.1326	.1316	.1288
.0800	.1357	.1338	.1318	.1297	.1284	.1275	.1252	.1229	.1204	.1190	.1179	.1153
.0900	.1236	.1218	.1199	.1179	.1167	.1158	.1136	.1114	.1091	.1077	.1068	.1043
.1000	.1134	.1117	.1099	.1080	.1068	.1060	.1039	.1018	.0996	.0983	.0974	.0950

TABLE 27. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9066	.9056	.9046	.9036	.9025	.9013	.9002	.8989	.8976	.8963	.8949
.0002	.8711	.8697	.8684	.8669	.8655	.8639	.8623	.8606	.8589	.8571	.8553
.0003	.8449	.8433	.8417	.8400	.8383	.8364	.8345	.8326	.8305	.8284	.8262
.0004	.8236	.8218	.8200	.8181	.8161	.8141	.8120	.8097	.8075	.8051	.8026
.0005	.8053	.8034	.8014	.7993	.7972	.7950	.7927	.7902	.7878	.7852	.7825
.0006	.7892	.7872	.7850	.7828	.7806	.7782	.7757	.7731	.7705	.7677	.7648
.0007	.7748	.7726	.7704	.7680	.7656	.7631	.7605	.7577	.7549	.7521	.7490
.0008	.7616	.7593	.7570	.7545	.7520	.7493	.7466	.7437	.7408	.7378	.7346
.0009	.7495	.7471	.7447	.7421	.7395	.7367	.7339	.7309	.7278	.7247	.7214
.0010	.7383	.7358	.7332	.7306	.7279	.7250	.7221	.7190	.7158	.7126	.7091
.0020	.6546	.6515	.6484	.6451	.6418	.6382	.6346	.6308	.6269	.6230	.6188
.0030	.5981	.5946	.5912	.5876	.5839	.5800	.5760	.5718	.5676	.5633	.5586
.0040	.5550	.5513	.5477	.5438	.5399	.5358	.5316	.5272	.5227	.5181	.5133
.0050	.5201	.5163	.5125	.5085	.5044	.5002	.4958	.4912	.4866	.4819	.4769
.0060	.4908	.4869	.4830	.4789	.4748	.4704	.4659	.4613	.4565	.4517	.4466
.0070	.4657	.4617	.4577	.4536	.4493	.4449	.4404	.4356	.4308	.4259	.4208
.0080	.4436	.4396	.4356	.4314	.4271	.4226	.4180	.4133	.4084	.4035	.3983
.0090	.4241	.4201	.4160	.4118	.4075	.4029	.3983	.3935	.3887	.3837	.3785
.0100	.4066	.4025	.3984	.3942	.3899	.3853	.3807	.3759	.3710	.3661	.3608
.0200	.2933	.2893	.2853	.2812	.2770	.2726	.2682	.2635	.2589	.2542	.2493
.0300	.2319	.2281	.2244	.2205	.2166	.2125	.2084	.2041	.1998	.1955	.1910
.0400	.1921	.1886	.1851	.1815	.1778	.1740	.1702	.1663	.1624	.1584	.1543
.0500	.1638	.1605	.1573	.1539	.1505	.1470	.1435	.1399	.1363	.1326	.1289
.0600	.1426	.1395	.1365	.1334	.1302	.1269	.1237	.1203	.1170	.1136	.1101
.0700	.1260	.1232	.1203	.1174	.1144	.1114	.1083	.1052	.1021	.0990	.0958
.0800	.1127	.1100	.1073	.1046	.1018	.0990	.0961	.0932	.0903	.0874	.0844
.0900	.1018	.0993	.0967	.0941	.0915	.0888	.0862	.0834	.0807	.0780	.0752
.1000	.0927	.0903	.0879	.0854	.0830	.0804	.0779	.0753	.0728	.0702	.0676

TABLE 28. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9040	.9034	.9027	.9020	.9015	.9012	.9004	.8995	.8986	.8980	.8976	.8966
.0002	.8675	.8666	.8657	.8647	.8641	.8637	.8626	.8614	.8602	.8594	.8589	.8575
.0003	.8407	.8397	.8386	.8374	.8367	.8361	.8348	.8335	.8320	.8311	.8305	.8289
.0004	.8189	.8177	.8165	.8152	.8144	.8138	.8123	.8108	.8091	.8082	.8075	.8057
.0005	.8002	.7989	.7976	.7962	.7953	.7946	.7930	.7914	.7896	.7885	.7878	.7858
.0006	.7837	.7824	.7810	.7794	.7785	.7778	.7761	.7743	.7724	.7713	.7705	.7684
.0007	.7690	.7675	.7660	.7644	.7634	.7627	.7609	.7590	.7570	.7558	.7549	.7527
.0008	.7555	.7540	.7524	.7508	.7497	.7489	.7471	.7451	.7430	.7417	.7408	.7385
.0009	.7432	.7416	.7399	.7382	.7371	.7363	.7343	.7323	.7301	.7288	.7278	.7254
.0010	.7317	.7301	.7283	.7265	.7254	.7246	.7225	.7204	.7181	.7168	.7158	.7133
.0020	.6464	.6444	.6423	.6401	.6387	.6377	.6352	.6326	.6298	.6281	.6270	.6239
.0030	.5891	.5868	.5845	.5821	.5805	.5794	.5766	.5738	.5707	.5689	.5676	.5642
.0040	.5454	.5431	.5406	.5380	.5363	.5351	.5322	.5292	.5260	.5240	.5227	.5192
.0050	.5101	.5077	.5051	.5024	.5007	.4995	.4965	.4934	.4900	.4880	.4866	.4830
.0060	.4806	.4781	.4755	.4727	.4710	.4697	.4666	.4635	.4600	.4580	.4565	.4528
.0070	.4553	.4527	.4501	.4473	.4455	.4442	.4411	.4378	.4344	.4323	.4308	.4270
.0080	.4331	.4306	.4278	.4250	.4232	.4219	.4188	.4155	.4120	.4099	.4084	.4046
.0090	.4135	.4109	.4082	.4053	.4035	.4022	.3991	.3958	.3922	.3901	.3887	.3848
.0100	.3959	.3933	.3906	.3877	.3859	.3846	.3814	.3781	.3746	.3725	.3710	.3672
.0200	.2829	.2803	.2777	.2749	.2732	.2719	.2689	.2657	.2623	.2603	.2589	.2553
.0300	.2221	.2197	.2173	.2147	.2130	.2119	.2090	.2061	.2030	.2011	.1998	.1965
.0400	.1829	.1807	.1784	.1761	.1745	.1735	.1708	.1682	.1653	.1636	.1624	.1593
.0500	.1553	.1532	.1511	.1489	.1475	.1465	.1441	.1416	.1389	.1374	.1363	.1335
.0600	.1346	.1327	.1307	.1287	.1274	.1264	.1242	.1219	.1194	.1180	.1170	.1144
.0700	.1186	.1168	.1149	.1130	.1118	.1109	.1088	.1067	.1044	.1030	.1021	.0997
.0800	.1057	.1040	.1023	.1005	.0993	.0985	.0966	.0946	.0924	.0912	.0903	.0881
.0900	.0952	.0936	.0920	.0903	.0892	.0884	.0866	.0847	.0827	.0815	.0807	.0786
.1000	.0864	.0849	.0834	.0818	.0808	.0800	.0783	.0765	.0746	.0735	.0728	.0708

TABLE 28. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Güntelberg*—Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8956	.8945	.8934	.8922	.8910	.8897	.8884	.8870	.8856	.8841	.8826
.0002	.8562	.8547	.8532	.8516	.8500	.8483	.8465	.8446	.8427	.8408	.8387
.0003	.8273	.8255	.8238	.8219	.8200	.8180	.8159	.8137	.8115	.8092	.8067
.0004	.8038	.8019	.7999	.7978	.7957	.7934	.7911	.7887	.7862	.7836	.7809
.0005	.7838	.7817	.7795	.7773	.7750	.7725	.7700	.7673	.7646	.7619	.7589
.0006	.7662	.7640	.7617	.7592	.7568	.7541	.7515	.7486	.7457	.7428	.7396
.0007	.7505	.7481	.7456	.7431	.7405	.7377	.7349	.7319	.7289	.7258	.7224
.0008	.7361	.7336	.7311	.7284	.7257	.7228	.7198	.7167	.7135	.7103	.7068
.0009	.7230	.7204	.7177	.7150	.7121	.7091	.7060	.7028	.6995	.6961	.6925
.0010	.7108	.7081	.7053	.7025	.6995	.6964	.6933	.6899	.6865	.6830	.6793
.0020	.6208	.6175	.6142	.6107	.6071	.6034	.5995	.5955	.5914	.5872	.5828
.0030	.5608	.5572	.5536	.5498	.5459	.5418	.5376	.5332	.5288	.5243	.5194
.0040	.5156	.5118	.5080	.5040	.4999	.4956	.4912	.4866	.4820	.4772	.4722
.0050	.4793	.4754	.4714	.4673	.4631	.4587	.4542	.4495	.4447	.4399	.4347
.0060	.4490	.4451	.4410	.4368	.4326	.4281	.4235	.4187	.4139	.4090	.4038
.0070	.4232	.4192	.4151	.4109	.4066	.4020	.3974	.3926	.3878	.3828	.3776
.0080	.4008	.3967	.3926	.3884	.3840	.3795	.3749	.3701	.3652	.3602	.3550
.0090	.3810	.3769	.3728	.3685	.3642	.3597	.3550	.3502	.3454	.3404	.3352
.0100	.3633	.3593	.3551	.3509	.3466	.3420	.3374	.3326	.3278	.3229	.3177
.0200	.2516	.2478	.2439	.2399	.2359	.2317	.2275	.2231	.2187	.2142	.2095
.0300	.1932	.1897	.1862	.1825	.1789	.1751	.1713	.1674	.1634	.1595	.1553
.0400	.1563	.1531	.1499	.1466	.1433	.1399	.1364	.1329	.1294	.1258	.1222
.0500	.1307	.1277	.1248	.1218	.1188	.1157	.1126	.1094	.1062	.1030	.0997
.0600	.1118	.1091	.1064	.1037	.1009	.0981	.0952	.0923	.0894	.0866	.0836
.0700	.0973	.0948	.0923	.0898	.0873	.0847	.0821	.0794	.0768	.0741	.0714
.0800	.0858	.0835	.0812	.0789	.0765	.0741	.0717	.0693	.0668	.0644	.0620
.0900	.0765	.0744	.0722	.0701	.0679	.0656	.0634	.0612	.0589	.0567	.0544
.1000	.0689	.0668	.0648	.0628	.0608	.0587	.0566	.0545	.0524	.0504	.0483

TABLE 29. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8741	.8733	.8724	.8715	.8709	.8704	.8694	.8683	.8671	.8664	.8659	.8646
.0002	.8274	.8263	.8251	.8238	.8231	.8225	.8211	.8196	.8181	.8171	.8164	.8147
.0003	.7935	.7921	.7908	.7893	.7884	.7877	.7861	.7844	.7826	.7815	.7807	.7787
.0004	.7661	.7646	.7631	.7615	.7605	.7597	.7579	.7560	.7540	.7528	.7519	.7497
.0005	.7429	.7413	.7397	.7379	.7368	.7360	.7341	.7320	.7298	.7285	.7276	.7251
.0006	.7226	.7209	.7192	.7173	.7161	.7153	.7132	.7110	.7087	.7073	.7063	.7038
.0007	.7045	.7027	.7009	.6990	.6977	.6968	.6946	.6924	.6899	.6884	.6874	.6847
.0008	.6881	.6863	.6844	.6823	.6811	.6801	.6778	.6755	.6729	.6714	.6703	.6675
.0009	.6731	.6713	.6693	.6672	.6658	.6649	.6625	.6601	.6574	.6558	.6547	.6518
.0010	.6593	.6574	.6553	.6531	.6518	.6508	.6484	.6458	.6431	.6415	.6403	.6374
.0020	.5589	.5566	.5542	.5517	.5500	.5489	.5460	.5430	.5398	.5379	.5366	.5331
.0030	.4938	.4913	.4887	.4860	.4842	.4830	.4800	.4768	.4734	.4714	.4699	.4662
.0040	.4456	.4431	.4404	.4376	.4358	.4345	.4313	.4281	.4246	.4225	.4210	.4173
.0050	.4076	.4050	.4023	.3994	.3976	.3963	.3932	.3899	.3863	.3842	.3827	.3789
.0060	.3765	.3739	.3711	.3683	.3664	.3651	.3619	.3587	.3551	.3530	.3515	.3477
.0070	.3502	.3476	.3449	.3420	.3402	.3389	.3357	.3325	.3289	.3268	.3254	.3216
.0080	.3277	.3251	.3224	.3196	.3177	.3165	.3133	.3101	.3066	.3045	.3030	.2993
.0090	.3081	.3055	.3028	.3000	.2982	.2969	.2938	.2906	.2871	.2851	.2836	.2799
.0100	.2907	.2882	.2855	.2827	.2810	.2797	.2766	.2734	.2700	.2680	.2666	.2629
.0200	.1857	.1835	.1812	.1788	.1772	.1762	.1735	.1708	.1679	.1662	.1650	.1619
.0300	.1345	.1326	.1306	.1285	.1272	.1263	.1241	.1218	.1193	.1178	.1168	.1143
.0400	.1038	.1022	.1005	.0987	.0975	.0967	.0948	.0928	.0907	.0895	.0886	.0864
.0500	.0835	.0820	.0805	.0789	.0779	.0772	.0755	.0738	.0720	.0709	.0701	.0682
.0600	.0690	.0677	.0663	.0650	.0641	.0635	.0620	.0604	.0588	.0579	.0572	.0555
.0700	.0582	.0571	.0559	.0546	.0538	.0533	.0519	.0506	.0491	.0483	.0477	.0462
.0800	.0500	.0489	.0478	.0467	.0460	.0455	.0443	.0431	.0418	.0410	.0405	.0392
.0900	.0435	.0425	.0415	.0405	.0399	.0394	.0383	.0372	.0360	.0353	.0349	.0337
.1000	.0382	.0373	.0364	.0355	.0349	.0345	.0335	.0325	.0314	.0308	.0304	.0293

TABLE 29. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8633	.8619	.8604	.8589	.8574	.8557	.8540	.8523	.8505	.8486	.8466
.0002	.8130	.8111	.8092	.8072	.8051	.8030	.8007	.7984	.7960	.7936	.7909
.0003	.7766	.7744	.7722	.7699	.7675	.7650	.7624	.7597	.7569	.7540	.7510
.0004	.7474	.7450	.7425	.7399	.7373	.7345	.7317	.7286	.7256	.7224	.7191
.0005	.7227	.7201	.7174	.7147	.7118	.7088	.7057	.7025	.6992	.6958	.6922
.0006	.7012	.6984	.6956	.6926	.6896	.6864	.6832	.6798	.6763	.6727	.6689
.0007	.6820	.6791	.6761	.6731	.6699	.6666	.6632	.6596	.6559	.6522	.6482
.0008	.6647	.6617	.6586	.6554	.6521	.6487	.6451	.6414	.6376	.6338	.6296
.0009	.6489	.6458	.6426	.6393	.6359	.6323	.6287	.6249	.6209	.6170	.6127
.0010	.6343	.6311	.6279	.6245	.6210	.6173	.6136	.6096	.6056	.6015	.5972
.0020	.5296	.5259	.5221	.5181	.5141	.5099	.5055	.5010	.4964	.4917	.4868
.0030	.4625	.4586	.4546	.4504	.4462	.4417	.4372	.4324	.4276	.4227	.4175
.0040	.4134	.4094	.4053	.4010	.3967	.3922	.3876	.3828	.3779	.3729	.3677
.0050	.3751	.3710	.3669	.3626	.3583	.3537	.3491	.3443	.3394	.3345	.3293
.0060	.3439	.3398	.3357	.3315	.3271	.3226	.3180	.3133	.3085	.3036	.2985
.0070	.3178	.3137	.3097	.3055	.3012	.2967	.2922	.2875	.2828	.2780	.2729
.0080	.2955	.2915	.2875	.2834	.2791	.2747	.2703	.2657	.2610	.2563	.2514
.0090	.2762	.2723	.2683	.2642	.2601	.2558	.2514	.2469	.2423	.2377	.2329
.0100	.2593	.2554	.2515	.2475	.2434	.2392	.2349	.2305	.2260	.2215	.2168
.0200	.1589	.1556	.1524	.1491	.1458	.1423	.1389	.1353	.1317	.1282	.1244
.0300	.1117	.1090	.1063	.1036	.1008	.0980	.0951	.0922	.0893	.0865	.0835
.0400	.0842	.0819	.0796	.0773	.0750	.0726	.0702	.0678	.0654	.0631	.0606
.0500	.0663	.0643	.0624	.0604	.0584	.0564	.0544	.0523	.0503	.0483	.0463
.0600	.0538	.0521	.0504	.0487	.0470	.0452	.0435	.0417	.0400	.0383	.0365
.0700	.0447	.0432	.0417	.0402	.0387	.0372	.0357	.0341	.0326	.0311	.0296
.0800	.0379	.0365	.0352	.0338	.0325	.0311	.0298	.0284	.0271	.0258	.0245
.0900	.0325	.0313	.0301	.0289	.0277	.0265	.0253	.0241	.0229	.0218	.0206
.1000	.0282	.0271	.0260	.0250	.0239	.0228	.0217	.0207	.0196	.0186	.0176

TABLE 30. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8358	.8347	.8336	.8324	.8316	.8311	.8298	.8284	.8269	.8260	.8253	.8237
.0002	.7767	.7753	.7739	.7723	.7713	.7706	.7689	.7671	.7651	.7639	.7631	.7609
.0003	.7346	.7330	.7313	.7295	.7283	.7275	.7255	.7234	.7211	.7198	.7188	.7164
.0004	.7010	.6992	.6974	.6954	.6941	.6932	.6910	.6887	.6863	.6848	.6837	.6810
.0005	.6728	.6709	.6689	.6668	.6655	.6645	.6622	.6597	.6571	.6555	.6544	.6515
.0006	.6484	.6464	.6443	.6421	.6407	.6397	.6372	.6346	.6319	.6302	.6290	.6260
.0007	.6269	.6248	.6226	.6203	.6188	.6178	.6152	.6125	.6096	.6079	.6067	.6035
.0008	.6075	.6054	.6031	.6007	.5992	.5981	.5954	.5927	.5897	.5879	.5866	.5834
.0009	.5899	.5877	.5854	.5830	.5814	.5803	.5775	.5747	.5716	.5698	.5685	.5652
.0010	.5738	.5716	.5692	.5667	.5651	.5640	.5612	.5582	.5551	.5532	.5519	.5485
.0020	.4604	.4579	.4552	.4524	.4507	.4494	.4463	.4430	.4396	.4375	.4360	.4323
.0030	.3903	.3877	.3850	.3821	.3803	.3790	.3758	.3725	.3689	.3668	.3654	.3615
.0040	.3404	.3378	.3350	.3322	.3304	.3291	.3259	.3226	.3191	.3170	.3156	.3118
.0050	.3022	.2997	.2970	.2942	.2924	.2911	.2880	.2848	.2814	.2793	.2779	.2742
.0060	.2718	.2693	.2667	.2640	.2622	.2610	.2579	.2548	.2515	.2495	.2481	.2445
.0070	.2469	.2444	.2419	.2392	.2375	.2363	.2334	.2303	.2271	.2251	.2238	.2203
.0080	.2259	.2236	.2211	.2185	.2168	.2156	.2128	.2099	.2067	.2048	.2035	.2002
.0090	.2081	.2057	.2033	.2008	.1992	.1981	.1953	.1925	.1894	.1876	.1864	.1831
.0100	.1926	.1904	.1880	.1856	.1840	.1829	.1802	.1775	.1745	.1728	.1716	.1685
.0200	.1059	.1043	.1025	.1007	.0996	.0987	.0968	.0948	.0926	.0914	.0905	.0883
.0300	.0689	.0676	.0663	.0649	.0640	.0634	.0619	.0603	.0587	.0578	.0571	.0554
.0400	.0488	.0478	.0467	.0456	.0449	.0444	.0432	.0420	.0408	.0400	.0395	.0382
.0500	.0365	.0356	.0348	.0339	.0333	.0329	.0319	.0310	.0299	.0293	.0289	.0279
.0600	.0283	.0276	.0269	.0261	.0256	.0253	.0245	.0237	.0229	.0224	.0220	.0212
.0700	.0226	.0220	.0214	.0207	.0203	.0201	.0194	.0187	.0180	.0176	.0173	.0166
.0800	.0184	.0179	.0174	.0168	.0165	.0162	.0157	.0151	.0145	.0142	.0139	.0133
.0900	.0153	.0148	.0144	.0139	.0136	.0134	.0129	.0124	.0119	.0116	.0114	.0109
.1000	.0129	.0125	.0121	.0117	.0114	.0112	.0108	.0104	.0099	.0097	.0095	.0090

TABLE 30. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8220	.8202	.8184	.8165	.8145	.8124	.8103	.8080	.8058	.8034	.8009
.0002	.7587	.7564	.7540	.7516	.7490	.7463	.7436	.7407	.7377	.7347	.7315
.0003	.7138	.7112	.7085	.7056	.7027	.6996	.6965	.6932	.6898	.6863	.6826
.0004	.6783	.6753	.6724	.6693	.6661	.6627	.6593	.6557	.6520	.6482	.6442
.0005	.6485	.6454	.6423	.6389	.6356	.6320	.6283	.6245	.6206	.6166	.6123
.0006	.6229	.6196	.6163	.6128	.6093	.6055	.6017	.5977	.5936	.5894	.5850
.0007	.6003	.5969	.5934	.5899	.5862	.5823	.5783	.5742	.5699	.5656	.5610
.0008	.5801	.5766	.5730	.5693	.5655	.5615	.5574	.5532	.5488	.5444	.5396
.0009	.5618	.5582	.5545	.5507	.5468	.5428	.5386	.5342	.5297	.5252	.5204
.0010	.5450	.5414	.5376	.5338	.5298	.5256	.5214	.5169	.5124	.5078	.5029
.0020	.4285	.4244	.4204	.4162	.4118	.4073	.4027	.3979	.3931	.3881	.3829
.0030	.3577	.3536	.3495	.3452	.3409	.3364	.3318	.3270	.3221	.3173	.3121
.0040	.3080	.3040	.2999	.2958	.2915	.2871	.2826	.2779	.2732	.2684	.2634
.0050	.2705	.2666	.2626	.2586	.2545	.2502	.2458	.2413	.2368	.2322	.2274
.0060	.2409	.2371	.2333	.2294	.2254	.2213	.2171	.2128	.2084	.2040	.1995
.0070	.2168	.2132	.2095	.2057	.2019	.1979	.1939	.1898	.1856	.1814	.1770
.0080	.1968	.1933	.1897	.1861	.1824	.1786	.1748	.1708	.1668	.1628	.1586
.0090	.1799	.1765	.1731	.1696	.1660	.1624	.1587	.1549	.1511	.1472	.1433
.0100	.1653	.1620	.1588	.1554	.1520	.1485	.1449	.1413	.1376	.1340	.1302
.0200	.0860	.0837	.0814	.0791	.0767	.0743	.0719	.0695	.0670	.0646	.0621
.0300	.0538	.0520	.0504	.0486	.0469	.0452	.0434	.0417	.0399	.0382	.0365
.0400	.0369	.0356	.0343	.0329	.0316	.0303	.0290	.0277	.0264	.0251	.0238
.0500	.0268	.0258	.0247	.0237	.0227	.0216	.0206	.0196	.0186	.0176	.0166
.0600	.0203	.0195	.0186	.0178	.0170	.0161	.0153	.0145	.0137	.0129	.0121
.0700	.0159	.0152	.0145	.0138	.0131	.0124	.0117	.0111	.0104	.0098	.0092
.0800	.0127	.0121	.0115	.0109	.0104	.0098	.0092	.0087	.0082	.0076	.0071
.0900	.0104	.0099	.0094	.0089	.0084	.0079	.0074	.0070	.0065	.0061	.0057
.1000	.0086	.0081	.0077	.0073	.0069	.0065	.0061	.0057	.0053	.0049	.0046

TABLE 31. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881	.9880
.0002	.9843	.9842	.9841	.9840	.9839	.9839	.9837	.9836	.9835	.9834	.9833	.9832
.0003	.9809	.9808	.9806	.9805	.9804	.9803	.9802	.9800	.9798	.9797	.9797	.9795
.0004	.9780	.9779	.9777	.9776	.9775	.9774	.9772	.9770	.9768	.9767	.9766	.9764
.0005	.9755	.9754	.9752	.9750	.9749	.9748	.9746	.9744	.9742	.9740	.9739	.9737
.0006	.9733	.9731	.9729	.9727	.9726	.9725	.9723	.9720	.9718	.9716	.9715	.9713
.0007	.9712	.9710	.9708	.9706	.9705	.9704	.9701	.9699	.9696	.9695	.9694	.9691
.0008	.9693	.9691	.9689	.9687	.9685	.9684	.9682	.9679	.9676	.9675	.9673	.9670
.0009	.9676	.9673	.9671	.9668	.9667	.9666	.9663	.9660	.9658	.9656	.9654	.9651
.0010	.9659	.9656	.9654	.9651	.9650	.9649	.9646	.9643	.9640	.9638	.9637	.9633
.0020	.9527	.9524	.9520	.9517	.9514	.9513	.9509	.9505	.9501	.9498	.9496	.9492
.0030	.9429	.9425	.9421	.9417	.9414	.9412	.9408	.9403	.9398	.9394	.9392	.9387
.0040	.9349	.9344	.9340	.9335	.9332	.9330	.9324	.9319	.9313	.9309	.9307	.9301
.0050	.9279	.9274	.9269	.9264	.9261	.9258	.9253	.9247	.9240	.9236	.9234	.9227
.0060	.9218	.9213	.9207	.9202	.9198	.9195	.9189	.9183	.9176	.9172	.9169	.9161
.0070	.9163	.9157	.9151	.9145	.9141	.9139	.9132	.9125	.9118	.9113	.9110	.9102
.0080	.9112	.9106	.9100	.9093	.9089	.9087	.9080	.9072	.9064	.9060	.9056	.9048
.0090	.9065	.9059	.9053	.9046	.9042	.9038	.9031	.9023	.9015	.9010	.9007	.8998
.0100	.9022	.9015	.9008	.9001	.8997	.8994	.8986	.8978	.8969	.8964	.8961	.8951
.0200	.8691	.8682	.8673	.8664	.8658	.8654	.8644	.8633	.8622	.8615	.8611	.8599
.0300	.8460	.8450	.8440	.8429	.8423	.8418	.8406	.8394	.8381	.8373	.8367	.8354
.0400	.8280	.8269	.8258	.8245	.8238	.8233	.8220	.8206	.8192	.8183	.8177	.8162
.0500	.8131	.8119	.8106	.8093	.8086	.8080	.8066	.8051	.8036	.8027	.8020	.8004
.0600	.8003	.7990	.7977	.7963	.7955	.7949	.7934	.7919	.7903	.7893	.7886	.7868
.0700	.7891	.7877	.7864	.7849	.7840	.7834	.7819	.7802	.7786	.7775	.7768	.7750
.0800	.7791	.7777	.7763	.7748	.7739	.7732	.7716	.7699	.7681	.7670	.7663	.7644
.0900	.7700	.7686	.7671	.7656	.7646	.7640	.7623	.7606	.7587	.7576	.7568	.7549
.1000	.7618	.7603	.7588	.7572	.7563	.7556	.7538	.7520	.7502	.7490	.7482	.7462

TABLE 31. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9878	.9877	.9875	.9874	.9873	.9871	.9870	.9868	.9867	.9865
.0002	.9830	.9828	.9827	.9825	.9823	.9821	.9819	.9817	.9815	.9813	.9810
.0003	.9793	.9791	.9789	.9786	.9784	.9782	.9780	.9777	.9775	.9772	.9769
.0004	.9762	.9759	.9757	.9755	.9752	.9749	.9747	.9744	.9741	.9738	.9735
.0005	.9735	.9732	.9729	.9727	.9724	.9721	.9718	.9715	.9711	.9708	.9704
.0006	.9710	.9707	.9704	.9701	.9698	.9695	.9692	.9688	.9685	.9681	.9677
.0007	.9688	.9685	.9682	.9679	.9675	.9672	.9668	.9664	.9661	.9657	.9653
.0008	.9667	.9664	.9661	.9657	.9654	.9650	.9646	.9642	.9638	.9634	.9630
.0009	.9648	.9645	.9641	.9638	.9634	.9630	.9626	.9622	.9617	.9613	.9608
.0010	.9630	.9626	.9623	.9619	.9615	.9611	.9607	.9602	.9598	.9593	.9588
.0020	.9487	.9482	.9477	.9472	.9466	.9461	.9455	.9449	.9443	.9436	.9430
.0030	.9381	.9375	.9369	.9363	.9356	.9350	.9343	.9336	.9328	.9320	.9312
.0040	.9294	.9288	.9281	.9274	.9266	.9259	.9251	.9243	.9234	.9225	.9216
.0050	.9220	.9212	.9205	.9197	.9189	.9180	.9172	.9163	.9153	.9144	.9134
.0060	.9154	.9146	.9137	.9129	.9120	.9111	.9102	.9092	.9082	.9072	.9061
.0070	.9094	.9085	.9077	.9068	.9058	.9049	.9039	.9028	.9018	.9007	.8995
.0080	.9039	.9030	.9021	.9012	.9002	.8992	.8981	.8970	.8959	.8947	.8935
.0090	.8989	.8980	.8970	.8960	.8949	.8939	.8928	.8916	.8904	.8892	.8879
.0100	.8942	.8932	.8922	.8912	.8901	.8890	.8878	.8866	.8854	.8841	.8827
.0200	.8586	.8573	.8560	.8547	.8532	.8518	.8503	.8487	.8471	.8454	.8437
.0300	.8339	.8324	.8309	.8293	.8277	.8260	.8243	.8225	.8206	.8187	.8166
.0400	.8146	.8130	.8113	.8096	.8078	.8059	.8040	.8020	.7999	.7978	.7956
.0500	.7987	.7969	.7951	.7932	.7913	.7893	.7872	.7851	.7829	.7806	.7782
.0600	.7850	.7832	.7812	.7793	.7772	.7751	.7729	.7707	.7683	.7659	.7634
.0700	.7731	.7711	.7691	.7671	.7649	.7627	.7604	.7581	.7556	.7531	.7505
.0800	.7625	.7604	.7583	.7562	.7540	.7517	.7493	.7468	.7443	.7417	.7390
.0900	.7529	.7508	.7486	.7464	.7441	.7417	.7393	.7367	.7341	.7314	.7286
.1000	.7441	.7420	.7398	.7375	.7351	.7327	.7302	.7275	.7248	.7221	.7192

TABLE 32. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Güntelberg*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9778	.9777	.9775	.9773	.9772	.9772	.9770	.9768	.9766	.9765	.9764	.9762
.0002	.9689	.9687	.9685	.9682	.9681	.9680	.9677	.9675	.9672	.9670	.9669	.9666
.0003	.9622	.9619	.9616	.9614	.9612	.9611	.9607	.9604	.9601	.9599	.9597	.9594
.0004	.9566	.9563	.9560	.9556	.9554	.9553	.9549	.9546	.9542	.9539	.9538	.9533
.0005	.9517	.9513	.9510	.9506	.9504	.9502	.9499	.9494	.9490	.9487	.9486	.9481
.0006	.9473	.9469	.9465	.9462	.9459	.9457	.9453	.9449	.9444	.9441	.9439	.9434
.0007	.9433	.9429	.9425	.9421	.9418	.9416	.9412	.9407	.9402	.9399	.9397	.9391
.0008	.9396	.9392	.9388	.9383	.9380	.9378	.9373	.9368	.9363	.9360	.9357	.9352
.0009	.9362	.9357	.9353	.9348	.9345	.9343	.9338	.9332	.9327	.9323	.9321	.9315
.0010	.9329	.9325	.9320	.9315	.9312	.9310	.9304	.9299	.9293	.9289	.9287	.9280
.0020	.9076	.9070	.9063	.9057	.9052	.9049	.9042	.9034	.9026	.9021	.9018	.9009
.0030	.8890	.8883	.8875	.8867	.8862	.8859	.8850	.8841	.8832	.8826	.8822	.8811
.0040	.8740	.8731	.8723	.8714	.8708	.8704	.8694	.8684	.8673	.8667	.8662	.8651
.0050	.8611	.8602	.8592	.8582	.8576	.8572	.8561	.8550	.8538	.8531	.8526	.8513
.0060	.8497	.8488	.8477	.8467	.8460	.8456	.8444	.8432	.8420	.8412	.8406	.8393
.0070	.8396	.8385	.8375	.8363	.8356	.8351	.8339	.8326	.8313	.8305	.8299	.8285
.0080	.8303	.8292	.8281	.8269	.8262	.8257	.8244	.8230	.8216	.8208	.8202	.8187
.0090	.8218	.8207	.8195	.8182	.8175	.8169	.8156	.8142	.8127	.8118	.8112	.8096
.0100	.8139	.8127	.8115	.8102	.8094	.8089	.8075	.8060	.8045	.8036	.8029	.8013
.0200	.7553	.7538	.7523	.7506	.7497	.7489	.7472	.7453	.7434	.7422	.7414	.7394
.0300	.7158	.7141	.7123	.7105	.7094	.7086	.7066	.7045	.7024	.7011	.7001	.6978
.0400	.6856	.6838	.6819	.6799	.6787	.6778	.6757	.6734	.6711	.6697	.6687	.6662
.0500	.6611	.6591	.6571	.6550	.6538	.6528	.6506	.6482	.6458	.6443	.6432	.6406
.0600	.6404	.6384	.6363	.6341	.6328	.6318	.6295	.6271	.6245	.6229	.6218	.6191
.0700	.6226	.6205	.6184	.6161	.6147	.6137	.6113	.6088	.6061	.6045	.6034	.6006
.0800	.6069	.6048	.6026	.6002	.5988	.5978	.5953	.5927	.5900	.5884	.5872	.5843
.0900	.5929	.5907	.5885	.5861	.5847	.5836	.5811	.5784	.5757	.5740	.5728	.5698
.1000	.5803	.5781	.5758	.5734	.5719	.5709	.5683	.5656	.5628	.5610	.5598	.5568

TABLE 32. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9759	.9757	.9755	.9752	.9750	.9747	.9744	.9741	.9738	.9735	.9732
.0002	.9663	.9659	.9656	.9653	.9649	.9645	.9642	.9637	.9633	.9629	.9625
.0003	.9590	.9586	.9582	.9578	.9573	.9569	.9564	.9559	.9554	.9549	.9544
.0004	.9529	.9525	.9520	.9515	.9510	.9505	.9500	.9494	.9488	.9482	.9476
.0005	.9476	.9471	.9466	.9461	.9455	.9449	.9443	.9437	.9431	.9424	.9417
.0006	.9429	.9423	.9418	.9412	.9406	.9400	.9393	.9387	.9380	.9372	.9365
.0007	.9386	.9380	.9374	.9367	.9361	.9354	.9347	.9340	.9333	.9325	.9317
.0008	.9346	.9339	.9333	.9326	.9320	.9313	.9305	.9298	.9290	.9282	.9273
.0009	.9309	.9302	.9295	.9288	.9281	.9274	.9266	.9258	.9249	.9241	.9232
.0010	.9274	.9267	.9260	.9252	.9245	.9237	.9229	.9220	.9212	.9203	.9193
.0020	.9000	.8991	.8982	.8972	.8961	.8951	.8940	.8928	.8917	.8904	.8892
.0030	.8801	.8790	.8778	.8767	.8754	.8742	.8729	.8715	.8701	.8687	.8672
.0040	.8639	.8626	.8613	.8600	.8587	.8572	.8558	.8543	.8527	.8511	.8494
.0050	.8500	.8487	.8473	.8458	.8444	.8428	.8412	.8396	.8379	.8361	.8342
.0060	.8379	.8364	.8349	.8334	.8318	.8301	.8284	.8267	.8248	.8229	.8210
.0070	.8270	.8255	.8239	.8222	.8205	.8188	.8170	.8151	.8132	.8112	.8091
.0080	.8171	.8155	.8138	.8121	.8103	.8085	.8066	.8046	.8026	.8005	.7983
.0090	.8080	.8063	.8046	.8028	.8009	.7990	.7970	.7950	.7929	.7907	.7884
.0100	.7996	.7978	.7960	.7942	.7922	.7902	.7882	.7861	.7839	.7816	.7792
.0200	.7373	.7350	.7328	.7304	.7280	.7255	.7230	.7203	.7176	.7147	.7118
.0300	.6955	.6930	.6904	.6878	.6851	.6823	.6794	.6764	.6734	.6702	.6669
.0400	.6636	.6609	.6582	.6554	.6525	.6495	.6464	.6432	.6399	.6365	.6329
.0500	.6379	.6351	.6322	.6292	.6262	.6230	.6198	.6164	.6129	.6094	.6056
.0600	.6163	.6133	.6103	.6073	.6041	.6008	.5974	.5939	.5903	.5867	.5828
.0700	.5977	.5946	.5915	.5884	.5851	.5817	.5783	.5746	.5709	.5672	.5632
.0800	.5814	.5782	.5751	.5718	.5685	.5650	.5615	.5578	.5540	.5501	.5460
.0900	.5668	.5636	.5604	.5571	.5537	.5501	.5465	.5428	.5389	.5350	.5308
.1000	.5537	.5505	.5472	.5439	.5404	.5368	.5331	.5293	.5254	.5214	.5172

TABLE 33. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Güntelberg*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9669	.9667	.9665	.9662	.9661	.9659	.9657	.9654	.9651	.9649	.9648	.9645
.0002	.9537	.9534	.9531	.9527	.9525	.9524	.9520	.9516	.9512	.9509	.9507	.9503
.0003	.9438	.9434	.9430	.9426	.9423	.9421	.9417	.9412	.9407	.9404	.9402	.9397
.0004	.9356	.9351	.9347	.9342	.9339	.9337	.9332	.9326	.9320	.9317	.9314	.9308
.0005	.9284	.9279	.9274	.9269	.9265	.9263	.9257	.9251	.9245	.9241	.9238	.9232
.0006	.9220	.9215	.9209	.9203	.9200	.9197	.9191	.9184	.9178	.9173	.9171	.9163
.0007	.9162	.9156	.9150	.9144	.9140	.9137	.9131	.9124	.9116	.9112	.9109	.9101
.0008	.9108	.9102	.9096	.9089	.9085	.9082	.9075	.9068	.9060	.9055	.9052	.9043
.0009	.9058	.9052	.9045	.9038	.9034	.9031	.9023	.9016	.9007	.9002	.8999	.8990
.0010	.9011	.9004	.8997	.8990	.8986	.8983	.8975	.8967	.8958	.8953	.8949	.8940
.0020	.8647	.8638	.8628	.8619	.8613	.8609	.8598	.8587	.8576	.8569	.8564	.8551
.0030	.8383	.8372	.8361	.8350	.8343	.8338	.8326	.8313	.8300	.8291	.8286	.8271
.0040	.8170	.8159	.8147	.8134	.8126	.8120	.8107	.8092	.8078	.8068	.8062	.8046
.0050	.7990	.7978	.7964	.7951	.7942	.7936	.7921	.7906	.7890	.7880	.7873	.7855
.0060	.7833	.7819	.7805	.7791	.7782	.7775	.7760	.7743	.7726	.7715	.7708	.7689
.0070	.7693	.7679	.7664	.7648	.7639	.7632	.7615	.7598	.7580	.7568	.7561	.7541
.0080	.7566	.7551	.7536	.7519	.7510	.7502	.7485	.7467	.7448	.7436	.7428	.7407
.0090	.7450	.7434	.7418	.7402	.7391	.7384	.7366	.7347	.7327	.7315	.7307	.7285
.0100	.7343	.7327	.7310	.7293	.7282	.7275	.7256	.7236	.7216	.7203	.7195	.7173
.0200	.6564	.6545	.6525	.6504	.6491	.6481	.6459	.6435	.6410	.6395	.6384	.6358
.0300	.6056	.6034	.6012	.5989	.5975	.5965	.5940	.5914	.5887	.5870	.5858	.5829
.0400	.5677	.5654	.5631	.5606	.5591	.5580	.5554	.5526	.5498	.5480	.5468	.5438
.0500	.5375	.5351	.5327	.5302	.5286	.5275	.5248	.5219	.5190	.5171	.5159	.5127
.0600	.5125	.5101	.5076	.5050	.5034	.5022	.4995	.4965	.4935	.4916	.4904	.4871
.0700	.4913	.4888	.4862	.4836	.4820	.4808	.4780	.4750	.4719	.4700	.4687	.4654
.0800	.4728	.4703	.4677	.4650	.4634	.4622	.4593	.4563	.4532	.4513	.4500	.4466
.0900	.4566	.4540	.4514	.4487	.4471	.4459	.4430	.4399	.4368	.4348	.4335	.4302
.1000	.4421	.4395	.4369	.4342	.4325	.4313	.4284	.4253	.4222	.4202	.4189	.4155

TABLE 33. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9641	.9638	.9634	.9630	.9627	.9623	.9619	.9614	.9610	.9605	.9601
.0002	.9498	.9494	.9489	.9484	.9478	.9473	.9467	.9461	.9455	.9449	.9442
.0003	.9391	.9385	.9379	.9373	.9367	.9360	.9353	.9346	.9339	.9331	.9323
.0004	.9302	.9295	.9289	.9281	.9274	.9267	.9259	.9251	.9242	.9234	.9225
.0005	.9225	.9217	.9210	.9202	.9194	.9186	.9177	.9168	.9159	.9149	.9139
.0006	.9156	.9148	.9139	.9131	.9122	.9113	.9104	.9094	.9084	.9074	.9063
.0007	.9093	.9084	.9075	.9066	.9057	.9047	.9037	.9027	.9016	.9005	.8993
.0008	.9035	.9026	.9016	.9007	.8997	.8987	.8976	.8965	.8954	.8942	.8929
.0009	.8981	.8971	.8962	.8952	.8941	.8930	.8919	.8908	.8896	.8883	.8870
.0010	.8930	.8920	.8910	.8900	.8889	.8878	.8866	.8854	.8841	.8828	.8815
.0020	.8539	.8525	.8512	.8498	.8483	.8468	.8453	.8436	.8420	.8403	.8384
.0030	.8256	.8241	.8225	.8208	.8191	.8173	.8155	.8136	.8117	.8097	.8075
.0040	.8029	.8012	.7994	.7976	.7957	.7937	.7917	.7896	.7874	.7852	.7828
.0050	.7837	.7818	.7799	.7779	.7759	.7737	.7716	.7693	.7669	.7645	.7620
.0060	.7670	.7650	.7629	.7608	.7586	.7564	.7540	.7516	.7491	.7465	.7438
.0070	.7521	.7500	.7478	.7456	.7433	.7409	.7385	.7359	.7333	.7306	.7277
.0080	.7386	.7364	.7342	.7318	.7294	.7270	.7244	.7217	.7190	.7162	.7132
.0090	.7263	.7240	.7217	.7193	.7168	.7142	.7116	.7088	.7060	.7031	.7000
.0100	.7150	.7126	.7102	.7077	.7052	.7025	.6998	.6969	.6940	.6910	.6878
.0200	.6331	.6302	.6273	.6243	.6212	.6180	.6147	.6113	.6078	.6043	.6005
.0300	.5800	.5768	.5737	.5704	.5670	.5636	.5600	.5563	.5525	.5487	.5446
.0400	.5406	.5373	.5340	.5306	.5270	.5234	.5197	.5158	.5119	.5078	.5036
.0500	.5095	.5061	.5027	.4991	.4955	.4917	.4879	.4839	.4798	.4757	.4713
.0600	.4838	.4803	.4768	.4732	.4695	.4657	.4618	.4577	.4536	.4493	.4449
.0700	.4621	.4585	.4550	.4513	.4475	.4437	.4397	.4356	.4314	.4271	.4226
.0800	.4433	.4397	.4361	.4324	.4286	.4247	.4207	.4166	.4123	.4080	.4035
.0900	.4267	.4232	.4195	.4158	.4120	.4081	.4040	.3999	.3956	.3913	.3868
.1000	.4121	.4085	.4048	.4011	.3972	.3933	.3893	.3851	.3808	.3765	.3720

TABLE 34. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Güntelberg*

(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9561	.9558	.9555	.9552	.9550	.9548	.9545	.9541	.9537	.9535	.9533	.9529
.0002	.9388	.9384	.9379	.9375	.9372	.9370	.9365	.9360	.9354	.9351	.9349	.9343
.0003	.9258	.9253	.9247	.9242	.9239	.9236	.9230	.9224	.9218	.9213	.9211	.9204
.0004	.9150	.9144	.9138	.9132	.9128	.9126	.9119	.9112	.9104	.9100	.9097	.9089
.0005	.9057	.9050	.9044	.9037	.9033	.9030	.9022	.9014	.9006	.9001	.8998	.8989
.0006	.8974	.8967	.8960	.8952	.8948	.8944	.8936	.8928	.8919	.8913	.8910	.8900
.0007	.8898	.8891	.8883	.8875	.8870	.8867	.8858	.8849	.8840	.8834	.8830	.8819
.0008	.8829	.8821	.8813	.8804	.8799	.8795	.8786	.8777	.8767	.8760	.8756	.8745
.0009	.8764	.8756	.8747	.8738	.8733	.8729	.8719	.8709	.8699	.8692	.8688	.8677
.0010	.8704	.8695	.8686	.8677	.8671	.8667	.8657	.8647	.8636	.8629	.8624	.8612
.0020	.8237	.8226	.8214	.8202	.8195	.8189	.8176	.8162	.8148	.8139	.8133	.8117
.0030	.7904	.7891	.7877	.7863	.7854	.7848	.7833	.7816	.7800	.7789	.7782	.7764
.0040	.7638	.7623	.7608	.7593	.7583	.7576	.7559	.7541	.7523	.7511	.7503	.7483
.0050	.7415	.7399	.7383	.7366	.7355	.7348	.7329	.7310	.7290	.7278	.7269	.7248
.0060	.7221	.7204	.7187	.7169	.7158	.7150	.7130	.7110	.7089	.7076	.7067	.7044
.0070	.7049	.7031	.7013	.6994	.6983	.6975	.6954	.6933	.6911	.6897	.6888	.6864
.0080	.6894	.6876	.6857	.6838	.6826	.6817	.6796	.6774	.6751	.6737	.6727	.6702
.0090	.6754	.6735	.6716	.6695	.6683	.6674	.6652	.6629	.6606	.6591	.6581	.6555
.0100	.6625	.6605	.6585	.6564	.6552	.6543	.6520	.6497	.6472	.6457	.6447	.6420
.0200	.5705	.5682	.5659	.5635	.5620	.5609	.5583	.5555	.5527	.5509	.5497	.5467
.0300	.5124	.5099	.5074	.5048	.5032	.5021	.4993	.4964	.4934	.4915	.4902	.4870
.0400	.4700	.4675	.4649	.4622	.4606	.4594	.4565	.4535	.4504	.4485	.4472	.4438
.0500	.4370	.4345	.4318	.4291	.4274	.4262	.4233	.4202	.4170	.4151	.4138	.4104
.0600	.4102	.4076	.4049	.4021	.4005	.3992	.3963	.3932	.3900	.3880	.3867	.3833
.0700	.3876	.3850	.3824	.3796	.3779	.3767	.3737	.3706	.3674	.3654	.3641	.3607
.0800	.3684	.3657	.3631	.3603	.3586	.3574	.3544	.3513	.3481	.3462	.3448	.3414
.0900	.3516	.3490	.3463	.3435	.3419	.3406	.3377	.3346	.3314	.3294	.3281	.3247
.1000	.3368	.3342	.3316	.3288	.3271	.3259	.3229	.3199	.3167	.3148	.3134	.3101

TABLE 34. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9525	.9520	.9515	.9510	.9505	.9500	.9495	.9489	.9483	.9477	.9471
.0002	.9337	.9331	.9324	.9317	.9310	.9303	.9296	.9288	.9280	.9272	.9263
.0003	.9196	.9189	.9181	.9173	.9165	.9156	.9147	.9138	.9128	.9118	.9108
.0004	.9080	.9072	.9063	.9054	.9044	.9034	.9024	.9014	.9003	.8992	.8980
.0005	.8980	.8970	.8960	.8950	.8940	.8929	.8918	.8906	.8894	.8882	.8869
.0006	.8890	.8880	.8869	.8858	.8847	.8835	.8823	.8811	.8798	.8784	.8770
.0007	.8809	.8798	.8787	.8775	.8763	.8750	.8737	.8724	.8710	.8696	.8681
.0008	.8734	.8723	.8711	.8698	.8685	.8672	.8659	.8644	.8630	.8615	.8599
.0009	.8665	.8653	.8640	.8627	.8614	.8600	.8586	.8571	.8555	.8539	.8523
.0010	.8600	.8587	.8574	.8561	.8547	.8532	.8517	.8502	.8485	.8469	.8452
.0020	.8101	.8084	.8067	.8049	.8031	.8012	.7992	.7972	.7951	.7929	.7906
.0030	.7745	.7726	.7706	.7685	.7664	.7642	.7619	.7596	.7571	.7546	.7520
.0040	.7463	.7441	.7419	.7396	.7373	.7349	.7324	.7298	.7271	.7244	.7215
.0050	.7226	.7203	.7179	.7154	.7129	.7103	.7077	.7049	.7020	.6991	.6960
.0060	.7021	.6996	.6971	.6945	.6919	.6891	.6863	.6834	.6803	.6772	.6740
.0070	.6840	.6814	.6788	.6761	.6733	.6704	.6675	.6644	.6612	.6580	.6546
.0080	.6677	.6650	.6623	.6595	.6566	.6536	.6506	.6474	.6441	.6408	.6372
.0090	.6529	.6501	.6474	.6445	.6415	.6384	.6353	.6320	.6286	.6252	.6215
.0100	.6394	.6365	.6337	.6307	.6276	.6245	.6213	.6179	.6144	.6109	.6072
.0200	.5436	.5403	.5370	.5335	.5300	.5264	.5227	.5188	.5149	.5108	.5066
.0300	.4837	.4802	.4767	.4731	.4693	.4655	.4616	.4576	.4534	.4492	.4447
.0400	.4404	.4369	.4332	.4295	.4257	.4218	.4178	.4137	.4094	.4051	.4006
.0500	.4069	.4033	.3997	.3959	.3921	.3881	.3841	.3799	.3757	.3713	.3668
.0600	.3798	.3762	.3725	.3688	.3649	.3610	.3569	.3527	.3485	.3442	.3396
.0700	.3572	.3536	.3499	.3462	.3423	.3384	.3344	.3302	.3260	.3217	.3172
.0800	.3380	.3344	.3307	.3270	.3231	.3192	.3152	.3111	.3069	.3026	.2982
.0900	.3213	.3177	.3141	.3103	.3065	.3027	.2987	.2946	.2904	.2862	.2818
.1000	.3066	.3031	.2995	.2958	.2920	.2882	.2842	.2802	.2760	.2719	.2675

TABLE 35. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Güntelberg*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9349	.9345	.9340	.9335	.9333	.9330	.9325	.9320	.9314	.9310	.9308	.9302
.0002	.9096	.9090	.9084	.9077	.9073	.9070	.9063	.9055	.9047	.9043	.9039	.9031
.0003	.8908	.8900	.8893	.8885	.8880	.8876	.8868	.8859	.8850	.8844	.8840	.8830
.0004	.8753	.8744	.8736	.8727	.8721	.8717	.8708	.8698	.8687	.8680	.8676	.8664
.0005	.8619	.8610	.8601	.8591	.8585	.8580	.8570	.8559	.8547	.8540	.8535	.8522
.0006	.8501	.8491	.8481	.8470	.8464	.8459	.8447	.8435	.8423	.8415	.8410	.8396
.0007	.8393	.8383	.8372	.8361	.8354	.8349	.8337	.8324	.8311	.8303	.8297	.8282
.0008	.8295	.8284	.8273	.8261	.8254	.8249	.8236	.8222	.8208	.8199	.8194	.8178
.0009	.8205	.8193	.8181	.8169	.8161	.8155	.8142	.8128	.8113	.8104	.8098	.8082
.0010	.8120	.8108	.8095	.8082	.8075	.8069	.8055	.8040	.8025	.8015	.8009	.7992
.0020	.7476	.7461	.7445	.7428	.7418	.7411	.7393	.7374	.7354	.7342	.7334	.7313
.0030	.7027	.7009	.6991	.6972	.6961	.6952	.6932	.6911	.6888	.6874	.6865	.6841
.0040	.6675	.6656	.6637	.6616	.6603	.6594	.6572	.6549	.6525	.6510	.6499	.6473
.0050	.6384	.6364	.6343	.6321	.6308	.6298	.6275	.6250	.6225	.6209	.6198	.6170
.0060	.6136	.6114	.6093	.6070	.6056	.6046	.6021	.5995	.5969	.5952	.5941	.5912
.0070	.5918	.5896	.5873	.5850	.5835	.5825	.5799	.5773	.5745	.5728	.5716	.5687
.0080	.5725	.5702	.5679	.5654	.5639	.5629	.5602	.5575	.5547	.5529	.5517	.5487
.0090	.5550	.5527	.5503	.5478	.5463	.5452	.5426	.5398	.5369	.5351	.5339	.5307
.0100	.5392	.5368	.5344	.5319	.5303	.5292	.5265	.5236	.5207	.5189	.5176	.5145
.0200	.4309	.4283	.4257	.4230	.4213	.4201	.4171	.4141	.4109	.4089	.4076	.4042
.0300	.3667	.3641	.3615	.3587	.3570	.3558	.3528	.3497	.3465	.3446	.3432	.3398
.0400	.3223	.3197	.3170	.3143	.3126	.3114	.3085	.3054	.3023	.3003	.2990	.2957
.0500	.2889	.2864	.2838	.2811	.2794	.2782	.2754	.2724	.2693	.2674	.2661	.2629
.0600	.2627	.2602	.2577	.2550	.2534	.2522	.2495	.2466	.2436	.2417	.2405	.2373
.0700	.2413	.2389	.2364	.2339	.2323	.2312	.2284	.2256	.2227	.2209	.2197	.2166
.0800	.2236	.2212	.2188	.2163	.2148	.2136	.2110	.2082	.2054	.2037	.2025	.1995
.0900	.2085	.2062	.2038	.2014	.1999	.1988	.1962	.1935	.1908	.1891	.1880	.1850
.1000	.1955	.1932	.1909	.1885	.1871	.1860	.1835	.1809	.1782	.1766	.1755	.1726

TABLE 35. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9295	.9289	.9282	.9275	.9267	.9260	.9252	.9244	.9235	.9226	.9217
.0002	.9022	.9013	.9003	.8994	.8984	.8973	.8963	.8951	.8940	.8928	.8915
.0003	.8819	.8808	.8797	.8785	.8773	.8761	.8748	.8735	.8721	.8707	.8692
.0004	.8653	.8640	.8628	.8615	.8601	.8587	.8573	.8558	.8542	.8526	.8509
.0005	.8509	.8496	.8482	.8468	.8453	.8437	.8422	.8405	.8388	.8371	.8352
.0006	.8382	.8368	.8353	.8337	.8321	.8305	.8288	.8270	.8252	.8233	.8213
.0007	.8268	.8252	.8236	.8220	.8203	.8185	.8167	.8148	.8129	.8109	.8088
.0008	.8163	.8146	.8130	.8112	.8094	.8076	.8057	.8037	.8017	.7996	.7974
.0009	.8066	.8049	.8031	.8013	.7994	.7975	.7955	.7934	.7913	.7891	.7868
.0010	.7975	.7957	.7939	.7920	.7901	.7881	.7860	.7839	.7817	.7794	.7770
.0020	.7291	.7268	.7245	.7221	.7196	.7171	.7145	.7117	.7089	.7060	.7030
.0030	.6816	.6791	.6764	.6737	.6709	.6680	.6651	.6620	.6588	.6556	.6521
.0040	.6447	.6419	.6390	.6361	.6331	.6300	.6268	.6234	.6200	.6165	.6128
.0050	.6142	.6113	.6083	.6052	.6020	.5987	.5953	.5918	.5882	.5845	.5806
.0060	.5883	.5852	.5820	.5788	.5755	.5721	.5686	.5649	.5612	.5573	.5533
.0070	.5656	.5624	.5592	.5559	.5525	.5489	.5453	.5415	.5377	.5337	.5296
.0080	.5456	.5423	.5390	.5356	.5321	.5285	.5248	.5209	.5170	.5129	.5087
.0090	.5276	.5242	.5208	.5174	.5138	.5101	.5063	.5024	.4984	.4943	.4900
.0100	.5112	.5078	.5044	.5009	.4972	.4935	.4897	.4857	.4816	.4775	.4731
.0200	.4008	.3971	.3935	.3897	.3859	.3819	.3779	.3737	.3695	.3651	.3606
.0300	.3364	.3327	.3291	.3254	.3215	.3176	.3136	.3095	.3053	.3010	.2966
.0400	.2923	.2887	.2852	.2815	.2778	.2740	.2701	.2661	.2620	.2579	.2536
.0500	.2596	.2561	.2527	.2491	.2455	.2418	.2380	.2342	.2302	.2263	.2221
.0600	.2341	.2307	.2274	.2239	.2204	.2169	.2132	.2095	.2057	.2019	.1979
.0700	.2135	.2103	.2070	.2037	.2003	.1968	.1934	.1898	.1861	.1824	.1786
.0800	.1965	.1933	.1902	.1870	.1837	.1804	.1770	.1735	.1700	.1665	.1628
.0900	.1821	.1791	.1760	.1729	.1697	.1665	.1632	.1599	.1565	.1531	.1496
.1000	.1698	.1668	.1639	.1609	.1578	.1547	.1515	.1483	.1450	.1417	.1384

TABLE 36. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9142	.9136	.9130	.9124	.9120	.9117	.9110	.9103	.9096	.9091	.9088	.9080
.0002	.8813	.8805	.8797	.8789	.8783	.8780	.8770	.8761	.8751	.8744	.8740	.8729
.0003	.8571	.8561	.8552	.8541	.8535	.8531	.8520	.8508	.8496	.8489	.8484	.8471
.0004	.8372	.8362	.8351	.8340	.8333	.8328	.8315	.8302	.8289	.8280	.8275	.8260
.0005	.8203	.8191	.8179	.8167	.8159	.8153	.8140	.8126	.8111	.8102	.8096	.8080
.0006	.8053	.8040	.8027	.8014	.8006	.8000	.7985	.7970	.7955	.7945	.7938	.7921
.0007	.7918	.7904	.7891	.7877	.7868	.7862	.7846	.7830	.7814	.7803	.7796	.7778
.0008	.7794	.7781	.7766	.7751	.7742	.7736	.7720	.7703	.7685	.7674	.7667	.7648
.0009	.7681	.7666	.7652	.7636	.7627	.7620	.7603	.7585	.7567	.7556	.7548	.7528
.0010	.7575	.7560	.7545	.7529	.7519	.7512	.7494	.7476	.7457	.7445	.7438	.7417
.0020	.6785	.6767	.6748	.6727	.6715	.6706	.6685	.6662	.6638	.6624	.6614	.6588
.0030	.6247	.6226	.6205	.6183	.6169	.6159	.6135	.6110	.6083	.6067	.6056	.6028
.0040	.5834	.5812	.5789	.5765	.5750	.5740	.5714	.5687	.5659	.5642	.5630	.5600
.0050	.5498	.5474	.5450	.5425	.5410	.5399	.5372	.5344	.5315	.5297	.5284	.5253
.0060	.5214	.5190	.5165	.5139	.5123	.5112	.5084	.5055	.5025	.5007	.4994	.4962
.0070	.4969	.4944	.4919	.4892	.4876	.4864	.4836	.4807	.4776	.4757	.4744	.4711
.0080	.4753	.4728	.4702	.4676	.4659	.4647	.4619	.4589	.4558	.4538	.4525	.4492
.0090	.4561	.4536	.4510	.4483	.4466	.4454	.4425	.4395	.4363	.4344	.4331	.4297
.0100	.4389	.4363	.4337	.4309	.4293	.4280	.4251	.4221	.4189	.4169	.4156	.4122
.0200	.3255	.3229	.3203	.3175	.3158	.3146	.3117	.3086	.3055	.3035	.3022	.2989
.0300	.2625	.2600	.2575	.2548	.2533	.2521	.2493	.2464	.2434	.2416	.2403	.2371
.0400	.2209	.2186	.2162	.2137	.2122	.2111	.2084	.2057	.2029	.2011	.2000	.1970
.0500	.1910	.1888	.1865	.1841	.1827	.1816	.1792	.1766	.1739	.1723	.1712	.1684
.0600	.1682	.1661	.1640	.1617	.1604	.1594	.1570	.1546	.1521	.1506	.1495	.1469
.0700	.1503	.1482	.1462	.1441	.1428	.1419	.1397	.1374	.1350	.1335	.1326	.1301
.0800	.1357	.1338	.1318	.1298	.1286	.1277	.1256	.1234	.1212	.1198	.1189	.1166
.0900	.1236	.1218	.1199	.1180	.1169	.1160	.1140	.1120	.1098	.1085	.1077	.1054
.1000	.1134	.1117	.1099	.1081	.1070	.1062	.1043	.1023	.1003	.0991	.0982	.0961

TABLE 36. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9072	.9063	.9054	.9045	.9035	.9025	.9015	.9004	.8993	.8982	.8970
.0002	.8718	.8706	.8694	.8681	.8668	.8655	.8641	.8627	.8612	.8597	.8581
.0003	.8457	.8443	.8429	.8414	.8399	.8383	.8367	.8350	.8332	.8314	.8295
.0004	.8245	.8229	.8213	.8197	.8180	.8162	.8144	.8125	.8105	.8085	.8064
.0005	.8064	.8046	.8029	.8011	.7992	.7973	.7953	.7932	.7911	.7889	.7866
.0006	.7904	.7885	.7866	.7847	.7827	.7806	.7785	.7763	.7740	.7716	.7692
.0007	.7760	.7740	.7720	.7700	.7679	.7657	.7634	.7611	.7587	.7562	.7536
.0008	.7629	.7608	.7587	.7566	.7544	.7521	.7497	.7473	.7447	.7421	.7394
.0009	.7508	.7487	.7465	.7443	.7420	.7396	.7371	.7345	.7319	.7292	.7264
.0010	.7396	.7374	.7351	.7328	.7304	.7280	.7254	.7228	.7200	.7172	.7143
.0020	.6562	.6535	.6507	.6479	.6449	.6419	.6387	.6355	.6321	.6287	.6251
.0030	.5999	.5969	.5938	.5906	.5874	.5840	.5805	.5769	.5733	.5695	.5655
.0040	.5569	.5537	.5504	.5471	.5436	.5400	.5364	.5326	.5287	.5247	.5205
.0050	.5221	.5188	.5154	.5119	.5083	.5046	.5008	.4968	.4928	.4887	.4844
.0060	.4929	.4895	.4860	.4824	.4787	.4749	.4710	.4670	.4629	.4586	.4542
.0070	.4678	.4643	.4607	.4571	.4533	.4495	.4455	.4414	.4372	.4330	.4285
.0080	.4458	.4422	.4386	.4349	.4311	.4273	.4233	.4191	.4149	.4106	.4061
.0090	.4263	.4227	.4191	.4153	.4115	.4076	.4036	.3994	.3952	.3908	.3863
.0100	.4088	.4052	.4015	.3978	.3939	.3900	.3860	.3818	.3775	.3732	.3687
.0200	.2955	.2919	.2883	.2847	.2809	.2771	.2732	.2692	.2651	.2610	.2567
.0300	.2339	.2306	.2272	.2238	.2203	.2167	.2131	.2094	.2056	.2018	.1978
.0400	.1940	.1908	.1877	.1845	.1812	.1779	.1746	.1711	.1676	.1641	.1605
.0500	.1656	.1627	.1597	.1567	.1537	.1506	.1475	.1443	.1411	.1379	.1345
.0600	.1443	.1415	.1388	.1360	.1332	.1303	.1274	.1244	.1214	.1184	.1154
.0700	.1276	.1250	.1225	.1198	.1172	.1145	.1118	.1090	.1063	.1035	.1006
.0800	.1142	.1118	.1094	.1069	.1044	.1019	.0994	.0968	.0942	.0916	.0889
.0900	.1032	.1009	.0986	.0963	.0940	.0916	.0892	.0868	.0844	.0819	.0794
.1000	.0940	.0918	.0897	.0875	.0853	.0830	.0808	.0785	.0762	.0739	.0716

TABLE 37. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9040	.9034	.9027	.9020	.9016	.9013	.9005	.8997	.8989	.8984	.8980	.8971
.0002	.8675	.8666	.8657	.8648	.8642	.8638	.8628	.8617	.8606	.8599	.8594	.8582
.0003	.8407	.8397	.8386	.8375	.8368	.8363	.8351	.8338	.8325	.8317	.8311	.8297
.0004	.8189	.8177	.8165	.8152	.8145	.8139	.8126	.8111	.8097	.8087	.8081	.8065
.0005	.8002	.7989	.7976	.7962	.7954	.7948	.7933	.7918	.7902	.7892	.7885	.7867
.0006	.7837	.7824	.7810	.7795	.7786	.7780	.7764	.7747	.7730	.7719	.7712	.7694
.0007	.7690	.7675	.7661	.7645	.7636	.7629	.7612	.7595	.7576	.7565	.7557	.7538
.0008	.7555	.7540	.7525	.7509	.7499	.7491	.7474	.7456	.7437	.7425	.7417	.7396
.0009	.7432	.7416	.7400	.7383	.7373	.7365	.7347	.7328	.7308	.7296	.7287	.7266
.0010	.7317	.7301	.7284	.7266	.7256	.7248	.7229	.7209	.7189	.7176	.7167	.7145
.0020	.6464	.6444	.6424	.6402	.6389	.6380	.6356	.6332	.6307	.6291	.6281	.6253
.0030	.5891	.5868	.5846	.5822	.5807	.5797	.5771	.5745	.5717	.5700	.5688	.5658
.0040	.5454	.5431	.5406	.5381	.5366	.5355	.5328	.5300	.5270	.5252	.5240	.5208
.0050	.5101	.5077	.5052	.5026	.5010	.4998	.4970	.4941	.4911	.4892	.4879	.4847
.0060	.4806	.4781	.4756	.4729	.4713	.4701	.4672	.4642	.4611	.4592	.4579	.4546
.0070	.4553	.4527	.4501	.4474	.4458	.4445	.4416	.4386	.4355	.4335	.4322	.4288
.0080	.4331	.4306	.4279	.4252	.4235	.4223	.4193	.4163	.4131	.4112	.4098	.4064
.0090	.4135	.4109	.4083	.4055	.4038	.4026	.3996	.3966	.3934	.3914	.3901	.3866
.0100	.3959	.3933	.3907	.3879	.3862	.3850	.3820	.3789	.3757	.3738	.3724	.3690
.0200	.2829	.2803	.2778	.2751	.2734	.2723	.2694	.2664	.2634	.2615	.2602	.2570
.0300	.2221	.2197	.2173	.2148	.2133	.2122	.2096	.2068	.2040	.2022	.2011	.1981
.0400	.1829	.1807	.1785	.1762	.1748	.1738	.1713	.1688	.1662	.1646	.1635	.1608
.0500	.1553	.1532	.1512	.1490	.1477	.1468	.1445	.1422	.1398	.1383	.1373	.1348
.0600	.1346	.1327	.1308	.1288	.1276	.1267	.1246	.1224	.1202	.1188	.1179	.1156
.0700	.1186	.1168	.1150	.1131	.1120	.1111	.1092	.1072	.1051	.1038	.1030	.1008
.0800	.1057	.1040	.1023	.1006	.0995	.0988	.0969	.0950	.0931	.0919	.0911	.0891
.0900	.0952	.0936	.0920	.0904	.0894	.0886	.0869	.0851	.0833	.0822	.0815	.0796
.1000	.0864	.0849	.0834	.0819	.0809	.0802	.0786	.0770	.0752	.0742	.0735	.0717

TABLE 37. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Güntelberg*—Continued

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8962	.8952	.8942	.8932	.8921	.8910	.8899	.8887	.8875	.8862	.8849
.0002	.8570	.8556	.8543	.8529	.8515	.8500	.8485	.8469	.8453	.8436	.8418
.0003	.8282	.8267	.8251	.8235	.8218	.8200	.8183	.8164	.8145	.8125	.8104
.0004	.8049	.8031	.8014	.7996	.7977	.7957	.7937	.7916	.7895	.7873	.7849
.0005	.7850	.7831	.7812	.7792	.7771	.7750	.7728	.7706	.7682	.7658	.7633
.0006	.7674	.7654	.7634	.7613	.7591	.7568	.7545	.7521	.7496	.7470	.7443
.0007	.7518	.7496	.7475	.7452	.7429	.7406	.7381	.7355	.7329	.7302	.7274
.0008	.7375	.7353	.7330	.7307	.7283	.7258	.7232	.7205	.7178	.7150	.7120
.0009	.7244	.7221	.7197	.7173	.7148	.7122	.7095	.7068	.7039	.7010	.6979
.0010	.7122	.7098	.7074	.7049	.7023	.6996	.6969	.6940	.6911	.6880	.6849
.0020	.6226	.6197	.6167	.6136	.6105	.6072	.6039	.6004	.5969	.5932	.5894
.0030	.5628	.5596	.5563	.5530	.5496	.5460	.5424	.5386	.5347	.5308	.5266
.0040	.5176	.5143	.5108	.5073	.5037	.5000	.4962	.4922	.4882	.4841	.4797
.0050	.4814	.4779	.4744	.4708	.4670	.4632	.4593	.4552	.4511	.4468	.4424
.0060	.4512	.4476	.4441	.4404	.4366	.4327	.4287	.4246	.4204	.4161	.4116
.0070	.4254	.4218	.4182	.4145	.4106	.4067	.4027	.3985	.3943	.3899	.3854
.0080	.4030	.3994	.3957	.3920	.3881	.3842	.3801	.3760	.3717	.3674	.3628
.0090	.3832	.3796	.3759	.3721	.3683	.3643	.3603	.3561	.3519	.3475	.3430
.0100	.3655	.3619	.3582	.3545	.3506	.3467	.3427	.3385	.3342	.3299	.3254
.0200	.2537	.2503	.2468	.2433	.2397	.2360	.2323	.2285	.2246	.2206	.2165
.0300	.1951	.1919	.1888	.1856	.1823	.1790	.1756	.1722	.1687	.1652	.1615
.0400	.1580	.1551	.1523	.1494	.1464	.1434	.1404	.1372	.1341	.1309	.1277
.0500	.1323	.1296	.1270	.1243	.1216	.1189	.1161	.1133	.1105	.1076	.1047
.0600	.1133	.1108	.1084	.1060	.1035	.1010	.0985	.0959	.0933	.0907	.0881
.0700	.0987	.0964	.0942	.0919	.0896	.0873	.0850	.0827	.0803	.0779	.0755
.0800	.0871	.0850	.0829	.0808	.0787	.0766	.0745	.0723	.0701	.0679	.0657
.0900	.0777	.0758	.0738	.0719	.0699	.0679	.0660	.0639	.0619	.0599	.0579
.1000	.0700	.0681	.0663	.0645	.0627	.0608	.0590	.0571	.0552	.0534	.0515

TABLE 38. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8741	.8733	.8724	.8715	.8710	.8706	.8696	.8686	.8675	.8668	.8664	.8652
.0002	.8274	.8263	.8251	.8239	.8232	.8226	.8213	.8200	.8186	.8177	.8171	.8155
.0003	.7935	.7921	.7908	.7894	.7885	.7879	.7864	.7848	.7831	.7821	.7814	.7796
.0004	.7661	.7646	.7632	.7616	.7606	.7599	.7582	.7565	.7546	.7535	.7527	.7507
.0005	.7429	.7413	.7397	.7380	.7370	.7362	.7344	.7325	.7305	.7293	.7284	.7263
.0006	.7226	.7209	.7192	.7174	.7163	.7155	.7136	.7116	.7094	.7081	.7072	.7050
.0007	.7045	.7027	.7009	.6991	.6979	.6971	.6950	.6929	.6907	.6893	.6884	.6860
.0008	.6881	.6863	.6844	.6825	.6813	.6804	.6783	.6760	.6737	.6723	.6713	.6688
.0009	.6731	.6713	.6693	.6673	.6660	.6651	.6629	.6606	.6583	.6568	.6558	.6532
.0010	.6593	.6574	.6554	.6533	.6520	.6511	.6488	.6464	.6440	.6425	.6414	.6388
.0020	.5589	.5566	.5543	.5518	.5503	.5492	.5465	.5438	.5409	.5391	.5379	.5348
.0030	.4938	.4913	.4888	.4861	.4845	.4833	.4805	.4776	.4745	.4726	.4713	.4680
.0040	.4456	.4431	.4404	.4377	.4360	.4348	.4319	.4289	.4257	.4238	.4224	.4190
.0050	.4076	.4050	.4024	.3996	.3979	.3967	.3937	.3907	.3875	.3855	.3841	.3807
.0060	.3765	.3739	.3712	.3684	.3667	.3655	.3625	.3594	.3562	.3543	.3529	.3495
.0070	.3502	.3476	.3450	.3422	.3405	.3393	.3363	.3333	.3301	.3281	.3268	.3234
.0080	.3277	.3251	.3225	.3197	.3180	.3168	.3139	.3108	.3077	.3057	.3044	.3010
.0090	.3081	.3055	.3029	.3001	.2985	.2973	.2944	.2913	.2882	.2863	.2850	.2817
.0100	.2907	.2882	.2856	.2829	.2812	.2801	.2772	.2742	.2711	.2692	.2679	.2647
.0200	.1857	.1835	.1812	.1789	.1775	.1765	.1740	.1715	.1688	.1672	.1661	.1634
.0300	.1345	.1326	.1307	.1287	.1274	.1266	.1245	.1223	.1201	.1187	.1178	.1155
.0400	.1038	.1022	.1005	.0988	.0977	.0970	.0951	.0933	.0914	.0902	.0894	.0874
.0500	.0835	.0820	.0805	.0790	.0781	.0774	.0758	.0742	.0725	.0715	.0708	.0691
.0600	.0690	.0677	.0664	.0650	.0642	.0636	.0622	.0608	.0593	.0584	.0578	.0563
.0700	.0582	.0571	.0559	.0547	.0540	.0534	.0522	.0509	.0496	.0488	.0483	.0469
.0800	.0500	.0489	.0479	.0468	.0461	.0456	.0445	.0434	.0422	.0415	.0410	.0398
.0900	.0435	.0425	.0415	.0405	.0400	.0395	.0385	.0375	.0364	.0358	.0353	.0342
.1000	.0382	.0373	.0364	.0355	.0350	.0346	.0337	.0327	.0318	.0312	.0308	.0298

TABLE 38. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8640	.8628	.8615	.8602	.8588	.8574	.8560	.8544	.8529	.8513	.8496
.0002	.8140	.8123	.8106	.8089	.8071	.8052	.8033	.8013	.7992	.7971	.7948
.0003	.7778	.7758	.7739	.7718	.7697	.7676	.7653	.7630	.7606	.7581	.7555
.0004	.7487	.7465	.7444	.7421	.7398	.7374	.7349	.7323	.7297	.7270	.7241
.0005	.7241	.7218	.7194	.7170	.7145	.7119	.7092	.7065	.7036	.7007	.6976
.0006	.7026	.7002	.6977	.6951	.6925	.6897	.6869	.6840	.6809	.6778	.6746
.0007	.6835	.6810	.6784	.6757	.6729	.6700	.6671	.6640	.6608	.6576	.6542
.0008	.6663	.6636	.6609	.6581	.6552	.6522	.6492	.6460	.6427	.6393	.6358
.0009	.6506	.6478	.6450	.6421	.6391	.6360	.6329	.6295	.6262	.6227	.6190
.0010	.6361	.6332	.6303	.6273	.6243	.6211	.6178	.6145	.6110	.6074	.6037
.0020	.5316	.5283	.5249	.5215	.5179	.5142	.5105	.5066	.5026	.4985	.4942
.0030	.4646	.4611	.4576	.4539	.4501	.4463	.4423	.4382	.4340	.4298	.4253
.0040	.4156	.4120	.4084	.4046	.4008	.3969	.3928	.3887	.3844	.3801	.3755
.0050	.3773	.3736	.3700	.3662	.3624	.3584	.3544	.3502	.3459	.3416	.3371
.0060	.3461	.3424	.3388	.3350	.3312	.3273	.3233	.3191	.3149	.3106	.3061
.0070	.3199	.3163	.3127	.3090	.3052	.3013	.2974	.2933	.2891	.2849	.2805
.0080	.2977	.2941	.2905	.2868	.2831	.2793	.2754	.2713	.2672	.2631	.2588
.0090	.2783	.2748	.2713	.2677	.2640	.2602	.2564	.2524	.2484	.2443	.2401
.0100	.2614	.2579	.2544	.2509	.2472	.2435	.2398	.2359	.2320	.2280	.2238
.0200	.1606	.1577	.1548	.1519	.1489	.1459	.1428	.1397	.1365	.1333	.1300
.0300	.1131	.1107	.1083	.1059	.1034	.1009	.0984	.0958	.0932	.0906	.0880
.0400	.0854	.0834	.0813	.0793	.0772	.0751	.0729	.0708	.0686	.0665	.0643
.0500	.0674	.0656	.0638	.0621	.0603	.0585	.0567	.0548	.0530	.0512	.0493
.0600	.0548	.0532	.0517	.0501	.0486	.0470	.0455	.0439	.0423	.0408	.0392
.0700	.0456	.0442	.0428	.0415	.0401	.0387	.0374	.0360	.0346	.0333	.0319
.0800	.0386	.0374	.0362	.0350	.0337	.0325	.0313	.0301	.0289	.0277	.0265
.0900	.0332	.0321	.0310	.0299	.0288	.0277	.0266	.0256	.0245	.0234	.0224
.1000	.0288	.0278	.0269	.0259	.0249	.0239	.0230	.0220	.0210	.0201	.0191

TABLE 39. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8358	.8347	.8336	.8325	.8318	.8312	.8300	.8287	.8273	.8265	.8259	.8245
.0002	.7767	.7753	.7739	.7724	.7715	.7708	.7692	.7675	.7657	.7646	.7639	.7619
.0003	.7346	.7330	.7313	.7296	.7285	.7277	.7259	.7239	.7219	.7206	.7197	.7175
.0004	.7010	.6992	.6974	.6955	.6943	.6935	.6914	.6893	.6870	.6857	.6847	.6823
.0005	.6728	.6709	.6690	.6669	.6657	.6648	.6626	.6603	.6579	.6564	.6554	.6528
.0006	.6484	.6464	.6444	.6422	.6409	.6400	.6377	.6353	.6327	.6312	.6301	.6274
.0007	.6269	.6248	.6227	.6204	.6191	.6181	.6157	.6132	.6105	.6089	.6078	.6050
.0008	.6075	.6054	.6032	.6008	.5994	.5984	.5959	.5933	.5906	.5890	.5878	.5849
.0009	.5899	.5877	.5855	.5831	.5816	.5806	.5780	.5754	.5726	.5709	.5697	.5667
.0010	.5738	.5716	.5693	.5668	.5654	.5643	.5617	.5589	.5561	.5544	.5532	.5501
.0020	.4604	.4579	.4553	.4526	.4509	.4497	.4468	.4438	.4407	.4387	.4374	.4341
.0030	.3903	.3877	.3850	.3822	.3806	.3793	.3764	.3733	.3701	.3681	.3668	.3633
.0040	.3404	.3378	.3351	.3323	.3307	.3294	.3265	.3234	.3202	.3183	.3170	.3136
.0050	.3022	.2997	.2971	.2943	.2927	.2915	.2886	.2856	.2825	.2805	.2793	.2759
.0060	.2718	.2693	.2668	.2641	.2625	.2613	.2585	.2556	.2525	.2507	.2494	.2462
.0070	.2469	.2444	.2419	.2393	.2378	.2366	.2339	.2310	.2281	.2263	.2251	.2220
.0080	.2259	.2236	.2211	.2186	.2171	.2160	.2133	.2106	.2077	.2060	.2048	.2018
.0090	.2081	.2057	.2034	.2009	.1995	.1984	.1958	.1931	.1904	.1887	.1876	.1846
.0100	.1926	.1904	.1881	.1857	.1843	.1832	.1807	.1781	.1755	.1738	.1727	.1699
.0200	.1059	.1043	.1026	.1008	.0997	.0990	.0971	.0953	.0933	.0921	.0913	.0893
.0300	.0689	.0676	.0663	.0649	.0641	.0635	.0621	.0607	.0592	.0583	.0577	.0562
.0400	.0488	.0478	.0467	.0457	.0450	.0445	.0434	.0423	.0412	.0405	.0400	.0388
.0500	.0365	.0356	.0348	.0339	.0334	.0330	.0321	.0312	.0303	.0297	.0293	.0284
.0600	.0283	.0276	.0269	.0261	.0257	.0254	.0247	.0239	.0231	.0227	.0224	.0216
.0700	.0226	.0220	.0214	.0208	.0204	.0201	.0195	.0189	.0182	.0178	.0176	.0169
.0800	.0184	.0179	.0174	.0169	.0165	.0163	.0158	.0152	.0147	.0144	.0141	.0136
.0900	.0153	.0148	.0144	.0139	.0137	.0135	.0130	.0125	.0121	.0118	.0116	.0111
.1000	.0129	.0125	.0121	.0117	.0114	.0113	.0109	.0105	.0101	.0098	.0097	.0092

TABLE 39. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Güntelberg* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8230	.8214	.8197	.8181	.8163	.8146	.8127	.8108	.8088	.8068	.8046
.0002	.7600	.7579	.7558	.7537	.7514	.7491	.7467	.7442	.7417	.7390	.7363
.0003	.7153	.7129	.7105	.7080	.7054	.7028	.7001	.6972	.6943	.6913	.6881
.0004	.6798	.6772	.6746	.6719	.6691	.6662	.6632	.6601	.6569	.6536	.6502
.0005	.6502	.6474	.6446	.6417	.6387	.6357	.6325	.6292	.6258	.6223	.6187
.0006	.6247	.6217	.6188	.6158	.6126	.6094	.6061	.6026	.5991	.5954	.5916
.0007	.6021	.5991	.5960	.5929	.5896	.5863	.5828	.5792	.5756	.5718	.5679
.0008	.5820	.5788	.5757	.5724	.5691	.5656	.5621	.5584	.5546	.5508	.5467
.0009	.5637	.5605	.5573	.5539	.5505	.5470	.5433	.5396	.5357	.5317	.5276
.0010	.5470	.5438	.5404	.5370	.5335	.5299	.5262	.5224	.5184	.5144	.5102
.0020	.4306	.4271	.4234	.4197	.4159	.4120	.4080	.4038	.3996	.3952	.3907
.0030	.3599	.3563	.3526	.3488	.3450	.3410	.3370	.3329	.3286	.3243	.3198
.0040	.3102	.3066	.3030	.2993	.2955	.2916	.2877	.2836	.2795	.2753	.2709
.0050	.2726	.2691	.2656	.2620	.2583	.2546	.2508	.2468	.2429	.2388	.2346
.0060	.2430	.2396	.2362	.2327	.2291	.2255	.2219	.2181	.2142	.2104	.2063
.0070	.2188	.2156	.2123	.2089	.2055	.2020	.1985	.1949	.1912	.1875	.1836
.0080	.1987	.1956	.1924	.1892	.1859	.1825	.1792	.1757	.1721	.1686	.1649
.0090	.1817	.1787	.1756	.1725	.1693	.1661	.1629	.1595	.1562	.1528	.1492
.0100	.1671	.1642	.1612	.1582	.1552	.1521	.1490	.1458	.1425	.1393	.1359
.0200	.0873	.0852	.0831	.0810	.0789	.0768	.0746	.0725	.0703	.0681	.0659
.0300	.0547	.0532	.0516	.0501	.0485	.0470	.0454	.0438	.0423	.0407	.0391
.0400	.0376	.0364	.0352	.0340	.0328	.0317	.0305	.0293	.0281	.0269	.0258
.0500	.0274	.0265	.0255	.0246	.0236	.0227	.0218	.0208	.0199	.0190	.0181
.0600	.0208	.0200	.0193	.0185	.0177	.0170	.0162	.0155	.0147	.0140	.0133
.0700	.0163	.0156	.0150	.0144	.0137	.0131	.0125	.0119	.0113	.0107	.0101
.0800	.0130	.0125	.0120	.0114	.0109	.0104	.0099	.0094	.0089	.0084	.0079
.0900	.0107	.0102	.0097	.0093	.0088	.0084	.0080	.0075	.0071	.0067	.0063
.1000	.0088	.0084	.0080	.0077	.0073	.0069	.0065	.0062	.0058	.0055	.0051

TABLE 40. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9888	.9888	.9887	.9886	.9885	.9885	.9884	.9883	.9882	.9881	.9881	.9879
.0002	.9843	.9842	.9841	.9840	.9839	.9838	.9837	.9836	.9834	.9833	.9832	.9831
.0003	.9809	.9808	.9806	.9805	.9804	.9803	.9801	.9800	.9798	.9797	.9796	.9794
.0004	.9780	.9779	.9777	.9775	.9774	.9774	.9772	.9770	.9767	.9766	.9765	.9763
.0005	.9755	.9754	.9752	.9750	.9749	.9748	.9746	.9743	.9741	.9739	.9738	.9736
.0006	.9733	.9731	.9729	.9727	.9725	.9725	.9722	.9720	.9717	.9716	.9714	.9711
.0007	.9712	.9710	.9708	.9706	.9704	.9703	.9701	.9698	.9695	.9694	.9692	.9689
.0008	.9693	.9691	.9689	.9686	.9685	.9684	.9681	.9678	.9675	.9673	.9672	.9669
.0009	.9675	.9673	.9671	.9668	.9667	.9665	.9663	.9660	.9656	.9655	.9653	.9650
.0010	.9659	.9656	.9654	.9651	.9649	.9648	.9645	.9642	.9639	.9637	.9635	.9632
.0020	.9526	.9523	.9520	.9516	.9514	.9512	.9508	.9504	.9499	.9496	.9494	.9489
.0030	.9428	.9424	.9420	.9416	.9413	.9411	.9406	.9401	.9396	.9392	.9390	.9384
.0040	.9348	.9343	.9339	.9334	.9331	.9328	.9323	.9317	.9311	.9307	.9304	.9298
.0050	.9278	.9273	.9268	.9263	.9259	.9257	.9251	.9245	.9238	.9234	.9231	.9223
.0060	.9217	.9212	.9206	.9200	.9197	.9194	.9187	.9180	.9173	.9169	.9165	.9157
.0070	.9161	.9156	.9150	.9144	.9140	.9137	.9130	.9123	.9115	.9110	.9107	.9098
.0080	.9110	.9105	.9098	.9092	.9088	.9085	.9077	.9070	.9061	.9056	.9053	.9044
.0090	.9063	.9057	.9051	.9044	.9040	.9036	.9029	.9021	.9012	.9007	.9003	.8993
.0100	.9020	.9013	.9006	.8999	.8995	.8991	.8983	.8975	.8966	.8960	.8957	.8947
.0200	.8687	.8679	.8670	.8661	.8655	.8650	.8640	.8629	.8617	.8610	.8605	.8592
.0300	.8455	.8446	.8435	.8425	.8418	.8413	.8401	.8388	.8375	.8367	.8361	.8346
.0400	.8273	.8263	.8252	.8240	.8233	.8227	.8214	.8200	.8185	.8176	.8170	.8154
.0500	.8123	.8112	.8100	.8087	.8079	.8073	.8059	.8045	.8029	.8019	.8012	.7995
.0600	.7994	.7982	.7969	.7956	.7948	.7942	.7927	.7911	.7894	.7884	.7877	.7859
.0700	.7881	.7868	.7855	.7841	.7832	.7826	.7811	.7794	.7777	.7766	.7759	.7740
.0800	.7780	.7767	.7753	.7739	.7730	.7723	.7707	.7690	.7672	.7661	.7654	.7634
.0900	.7688	.7675	.7661	.7646	.7637	.7630	.7614	.7596	.7578	.7567	.7559	.7538
.1000	.7605	.7592	.7577	.7562	.7552	.7546	.7529	.7511	.7492	.7480	.7472	.7451

40. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9878	.9877	.9876	.9874	.9873	.9871	.9869	.9868	.9866	.9864	.9862
.0002	.9829	.9827	.9825	.9823	.9821	.9819	.9817	.9814	.9812	.9809	.9807
.0003	.9792	.9789	.9787	.9784	.9782	.9779	.9777	.9774	.9771	.9768	.9764
.0004	.9760	.9758	.9755	.9752	.9749	.9746	.9743	.9740	.9736	.9733	.9729
.0005	.9733	.9730	.9727	.9724	.9721	.9717	.9714	.9710	.9706	.9703	.9698
.0006	.9709	.9705	.9702	.9699	.9695	.9692	.9688	.9684	.9680	.9675	.9671
.0007	.9686	.9683	.9679	.9676	.9672	.9668	.9664	.9659	.9655	.9650	.9646
.0008	.9665	.9662	.9658	.9654	.9650	.9646	.9642	.9637	.9632	.9627	.9622
.0009	.9646	.9642	.9638	.9634	.9630	.9626	.9621	.9616	.9611	.9606	.9601
.0010	.9628	.9624	.9620	.9615	.9611	.9606	.9601	.9596	.9591	.9586	.9580
.0020	.9484	.9479	.9473	.9467	.9461	.9455	.9448	.9441	.9434	.9427	.9419
.0030	.9378	.9371	.9364	.9357	.9350	.9342	.9335	.9326	.9318	.9309	.9300
.0040	.9291	.9283	.9275	.9268	.9259	.9251	.9242	.9232	.9223	.9213	.9202
.0050	.9215	.9207	.9199	.9190	.9181	.9172	.9162	.9152	.9141	.9130	.9119
.0060	.9149	.9140	.9131	.9122	.9112	.9102	.9091	.9080	.9069	.9057	.9045
.0070	.9089	.9080	.9070	.9060	.9050	.9039	.9028	.9016	.9004	.8991	.8978
.0080	.9034	.9024	.9014	.9004	.8993	.8981	.8969	.8957	.8944	.8931	.8917
.0090	.8984	.8973	.8963	.8951	.8940	.8928	.8916	.8902	.8889	.8875	.8861
.0100	.8936	.8926	.8914	.8903	.8891	.8878	.8866	.8852	.8838	.8824	.8808
.0200	.8579	.8565	.8551	.8536	.8521	.8504	.8488	.8470	.8452	.8434	.8414
.0300	.8331	.8315	.8299	.8282	.8264	.8245	.8226	.8206	.8186	.8165	.8142
.0400	.8137	.8120	.8102	.8083	.8064	.8044	.8023	.8001	.7978	.7955	.7931
.0500	.7977	.7958	.7939	.7919	.7899	.7877	.7855	.7831	.7808	.7783	.7757
.0600	.7840	.7821	.7801	.7779	.7758	.7735	.7712	.7687	.7662	.7636	.7609
.0700	.7721	.7700	.7679	.7657	.7635	.7611	.7586	.7561	.7535	.7508	.7479
.0800	.7614	.7593	.7571	.7548	.7525	.7500	.7475	.7449	.7422	.7394	.7365
.0900	.7518	.7496	.7473	.7450	.7426	.7401	.7375	.7348	.7320	.7292	.7261
.1000	.7430	.7408	.7385	.7361	.7336	.7310	.7284	.7256	.7228	.7198	.7168

TABLE 41. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9778	.9777	.9775	.9773	.9772	.9771	.9769	.9767	.9765	.9764	.9763	.9760
.0002	.9689	.9687	.9685	.9682	.9681	.9679	.9677	.9674	.9671	.9669	.9668	.9664
.0003	.9622	.9619	.9616	.9613	.9611	.9610	.9607	.9603	.9600	.9597	.9596	.9592
.0004	.9565	.9562	.9559	.9556	.9554	.9552	.9548	.9544	.9540	.9538	.9536	.9531
.0005	.9516	.9513	.9510	.9506	.9504	.9502	.9498	.9493	.9489	.9486	.9484	.9478
.0006	.9473	.9469	.9465	.9461	.9459	.9457	.9452	.9447	.9442	.9439	.9437	.9431
.0007	.9433	.9429	.9425	.9420	.9417	.9415	.9411	.9406	.9400	.9397	.9394	.9388
.0008	.9396	.9391	.9387	.9383	.9380	.9377	.9372	.9367	.9361	.9357	.9355	.9349
.0009	.9361	.9357	.9352	.9347	.9344	.9342	.9337	.9331	.9325	.9321	.9318	.9312
.0010	.9329	.9324	.9319	.9314	.9311	.9309	.9303	.9297	.9291	.9287	.9284	.9277
.0020	.9075	.9069	.9062	.9055	.9051	.9048	.9040	.9032	.9023	.9018	.9014	.9005
.0030	.8889	.8882	.8874	.8866	.8861	.8857	.8848	.8838	.8828	.8822	.8817	.8806
.0040	.8738	.8730	.8721	.8712	.8706	.8702	.8691	.8681	.8669	.8662	.8657	.8644
.0050	.8609	.8600	.8590	.8580	.8574	.8569	.8558	.8546	.8534	.8526	.8521	.8507
.0060	.8495	.8485	.8475	.8464	.8458	.8453	.8441	.8428	.8414	.8406	.8401	.8386
.0070	.8393	.8383	.8372	.8361	.8353	.8348	.8335	.8322	.8308	.8299	.8293	.8277
.0080	.8300	.8289	.8278	.8266	.8258	.8253	.8240	.8226	.8211	.8202	.8195	.8179
.0090	.8215	.8203	.8192	.8179	.8171	.8166	.8152	.8137	.8121	.8112	.8105	.8088
.0100	.8135	.8124	.8111	.8099	.8090	.8084	.8070	.8055	.8039	.8029	.8022	.8004
.0200	.7547	.7532	.7517	.7501	.7490	.7483	.7465	.7446	.7426	.7414	.7405	.7383
.0300	.7149	.7133	.7116	.7098	.7086	.7078	.7058	.7037	.7014	.7000	.6991	.6966
.0400	.6845	.6827	.6809	.6790	.6777	.6769	.6747	.6724	.6700	.6685	.6675	.6649
.0500	.6598	.6580	.6560	.6540	.6527	.6518	.6495	.6471	.6446	.6431	.6420	.6392
.0600	.6390	.6371	.6351	.6330	.6316	.6307	.6283	.6259	.6232	.6216	.6205	.6176
.0700	.6210	.6191	.6170	.6148	.6135	.6125	.6101	.6075	.6048	.6032	.6020	.5991
.0800	.6052	.6032	.6011	.5989	.5975	.5965	.5940	.5914	.5886	.5870	.5858	.5828
.0900	.5911	.5891	.5869	.5847	.5832	.5822	.5797	.5771	.5742	.5725	.5714	.5683
.1000	.5784	.5763	.5741	.5719	.5704	.5694	.5668	.5641	.5613	.5596	.5584	.5552

TABLE 41. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9758	.9755	.9753	.9750	.9747	.9744	.9741	.9737	.9734	.9730	.9726
.0002	.9661	.9657	.9653	.9649	.9645	.9641	.9637	.9632	.9627	.9622	.9617
.0003	.9587	.9583	.9578	.9574	.9569	.9563	.9558	.9552	.9547	.9541	.9534
.0004	.9526	.9521	.9516	.9511	.9505	.9499	.9493	.9486	.9480	.9473	.9466
.0005	.9473	.9467	.9462	.9456	.9449	.9443	.9436	.9429	.9422	.9414	.9406
.0006	.9426	.9419	.9413	.9406	.9400	.9393	.9385	.9377	.9369	.9361	.9352
.0007	.9382	.9375	.9369	.9362	.9354	.9347	.9339	.9330	.9322	.9313	.9304
.0008	.9342	.9335	.9328	.9320	.9313	.9304	.9296	.9287	.9278	.9269	.9259
.0009	.9305	.9297	.9290	.9282	.9274	.9265	.9256	.9247	.9237	.9228	.9217
.0010	.9270	.9262	.9254	.9246	.9237	.9228	.9219	.9209	.9199	.9189	.9178
.0020	.8995	.8984	.8974	.8963	.8951	.8939	.8927	.8913	.8900	.8886	.8871
.0030	.8794	.8782	.8769	.8756	.8743	.8728	.8713	.8698	.8682	.8666	.8648
.0040	.8631	.8618	.8603	.8589	.8573	.8557	.8541	.8524	.8506	.8488	.8468
.0050	.8493	.8477	.8462	.8446	.8429	.8412	.8394	.8375	.8356	.8336	.8315
.0060	.8371	.8354	.8338	.8321	.8303	.8284	.8265	.8245	.8224	.8203	.8180
.0070	.8261	.8244	.8227	.8208	.8190	.8170	.8150	.8128	.8106	.8084	.8060
.0080	.8162	.8144	.8126	.8107	.8087	.8066	.8045	.8023	.8000	.7976	.7951
.0090	.8071	.8052	.8033	.8013	.7992	.7971	.7949	.7925	.7902	.7877	.7851
.0100	.7986	.7966	.7947	.7926	.7905	.7883	.7860	.7836	.7811	.7786	.7759
.0200	.7360	.7336	.7312	.7286	.7260	.7232	.7204	.7174	.7144	.7113	.7080
.0300	.6941	.6914	.6887	.6858	.6829	.6799	.6767	.6734	.6701	.6666	.6630
.0400	.6622	.6593	.6564	.6534	.6503	.6470	.6437	.6401	.6366	.6329	.6290
.0500	.6364	.6334	.6303	.6272	.6239	.6205	.6170	.6133	.6096	.6058	.6017
.0600	.6147	.6116	.6085	.6052	.6018	.5983	.5947	.5909	.5871	.5831	.5789
.0700	.5961	.5929	.5897	.5863	.5829	.5792	.5755	.5717	.5677	.5637	.5594
.0800	.5797	.5765	.5732	.5698	.5662	.5625	.5588	.5548	.5508	.5467	.5424
.0900	.5652	.5619	.5585	.5550	.5515	.5477	.5439	.5399	.5358	.5317	.5273
.1000	.5521	.5487	.5454	.5418	.5382	.5344	.5306	.5265	.5224	.5182	.5137

TABLE 42. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9669	.9667	.9664	.9662	.9660	.9659	.9656	.9653	.9650	.9648	.9646	.9643
.0002	.9537	.9534	.9531	.9527	.9525	.9523	.9519	.9515	.9510	.9508	.9506	.9501
.0003	.9438	.9434	.9430	.9426	.9423	.9421	.9416	.9411	.9405	.9402	.9400	.9394
.0004	.9355	.9351	.9346	.9341	.9338	.9336	.9330	.9325	.9318	.9315	.9312	.9305
.0005	.9284	.9279	.9273	.9268	.9265	.9262	.9256	.9250	.9243	.9238	.9236	.9228
.0006	.9219	.9214	.9209	.9203	.9199	.9196	.9190	.9183	.9175	.9171	.9167	.9159
.0007	.9161	.9155	.9149	.9143	.9139	.9136	.9129	.9122	.9114	.9109	.9105	.9097
.0008	.9107	.9101	.9095	.9088	.9084	.9081	.9073	.9066	.9057	.9052	.9048	.9039
.0009	.9057	.9051	.9044	.9037	.9033	.9029	.9022	.9013	.9004	.8999	.8995	.8985
.0010	.9010	.9004	.8997	.8989	.8985	.8981	.8973	.8964	.8955	.8949	.8945	.8935
.0020	.8645	.8636	.8627	.8617	.8611	.8606	.8595	.8584	.8571	.8564	.8559	.8545
.0030	.8381	.8370	.8359	.8348	.8341	.8335	.8322	.8309	.8294	.8285	.8279	.8263
.0040	.8168	.8156	.8144	.8131	.8123	.8117	.8103	.8088	.8072	.8062	.8055	.8037
.0050	.7987	.7975	.7962	.7948	.7939	.7932	.7917	.7901	.7883	.7872	.7865	.7846
.0060	.7830	.7816	.7802	.7787	.7778	.7771	.7755	.7737	.7719	.7707	.7700	.7679
.0070	.7689	.7675	.7660	.7645	.7635	.7628	.7610	.7592	.7572	.7560	.7552	.7531
.0080	.7562	.7547	.7532	.7515	.7505	.7498	.7479	.7460	.7440	.7427	.7419	.7396
.0090	.7445	.7430	.7414	.7397	.7386	.7379	.7360	.7340	.7319	.7306	.7297	.7274
.0100	.7338	.7322	.7306	.7288	.7277	.7269	.7250	.7229	.7207	.7194	.7185	.7161
.0200	.6556	.6537	.6517	.6496	.6483	.6473	.6450	.6425	.6399	.6383	.6372	.6344
.0300	.6045	.6024	.6002	.5980	.5965	.5955	.5929	.5903	.5874	.5857	.5845	.5814
.0400	.5663	.5641	.5619	.5595	.5580	.5569	.5542	.5514	.5484	.5466	.5454	.5421
.0500	.5360	.5337	.5314	.5289	.5273	.5262	.5235	.5206	.5175	.5157	.5144	.5110
.0600	.5108	.5085	.5061	.5036	.5020	.5009	.4981	.4951	.4920	.4901	.4888	.4854
.0700	.4894	.4871	.4846	.4821	.4805	.4793	.4765	.4735	.4704	.4684	.4671	.4637
.0800	.4708	.4685	.4660	.4635	.4618	.4607	.4578	.4548	.4516	.4497	.4484	.4449
.0900	.4545	.4521	.4496	.4471	.4454	.4442	.4414	.4384	.4351	.4332	.4319	.4284
.1000	.4399	.4375	.4350	.4325	.4308	.4296	.4267	.4237	.4205	.4186	.4172	.4137

TABLE 42. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9639	.9635	.9631	.9627	.9623	.9618	.9613	.9608	.9603	.9598	.9592
.0002	.9496	.9490	.9485	.9479	.9473	.9466	.9460	.9453	.9446	.9439	.9431
.0003	.9388	.9381	.9374	.9367	.9360	.9352	.9345	.9336	.9328	.9319	.9310
.0004	.9298	.9291	.9283	.9275	.9267	.9258	.9249	.9240	.9230	.9220	.9209
.0005	.9220	.9212	.9204	.9195	.9186	.9176	.9166	.9156	.9145	.9134	.9122
.0006	.9151	.9142	.9133	.9123	.9113	.9103	.9092	.9081	.9069	.9057	.9045
.0007	.9088	.9078	.9068	.9058	.9047	.9036	.9025	.9013	.9000	.8988	.8974
.0008	.9029	.9019	.9009	.8998	.8987	.8975	.8963	.8950	.8937	.8924	.8909
.0009	.8975	.8965	.8954	.8942	.8931	.8918	.8905	.8892	.8878	.8864	.8849
.0010	.8925	.8913	.8902	.8890	.8878	.8865	.8851	.8837	.8823	.8808	.8792
.0020	.8531	.8516	.8501	.8485	.8469	.8452	.8434	.8415	.8396	.8377	.8356
.0030	.8247	.8230	.8212	.8193	.8174	.8154	.8134	.8112	.8090	.8067	.8043
.0040	.8019	.8000	.7980	.7960	.7938	.7916	.7893	.7869	.7845	.7819	.7792
.0050	.7826	.7805	.7784	.7762	.7739	.7715	.7690	.7664	.7638	.7611	.7582
.0060	.7658	.7636	.7613	.7590	.7566	.7540	.7514	.7486	.7458	.7429	.7399
.0070	.7509	.7485	.7462	.7437	.7411	.7385	.7357	.7328	.7299	.7269	.7236
.0080	.7374	.7349	.7325	.7299	.7272	.7244	.7216	.7186	.7155	.7124	.7090
.0090	.7250	.7225	.7199	.7173	.7145	.7116	.7087	.7056	.7024	.6991	.6957
.0100	.7137	.7110	.7084	.7057	.7028	.6999	.6968	.6936	.6903	.6870	.6834
.0200	.6315	.6284	.6252	.6220	.6186	.6151	.6115	.6077	.6038	.5999	.5957
.0300	.5783	.5749	.5715	.5680	.5644	.5606	.5567	.5526	.5485	.5443	.5398
.0400	.5389	.5353	.5318	.5281	.5244	.5204	.5164	.5122	.5079	.5035	.4989
.0500	.5077	.5041	.5005	.4967	.4928	.4888	.4847	.4803	.4759	.4715	.4668
.0600	.4820	.4783	.4746	.4708	.4669	.4628	.4586	.4542	.4498	.4453	.4405
.0700	.4602	.4565	.4528	.4489	.4450	.4408	.4366	.4322	.4278	.4232	.4184
.0800	.4414	.4377	.4340	.4301	.4261	.4219	.4177	.4133	.4088	.4042	.3994
.0900	.4249	.4212	.4174	.4135	.4095	.4054	.4011	.3967	.3922	.3877	.3829
.1000	.4102	.4065	.4027	.3988	.3948	.3907	.3865	.3820	.3776	.3730	.3682

TABLE 43. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9561	.9558	.9555	.9552	.9550	.9548	.9544	.9540	.9536	.9533	.9531	.9527
.0002	.9388	.9383	.9379	.9374	.9371	.9369	.9364	.9358	.9352	.9349	.9346	.9340
.0003	.9257	.9252	.9247	.9241	.9238	.9235	.9229	.9222	.9215	.9211	.9208	.9200
.0004	.9150	.9144	.9138	.9132	.9127	.9124	.9117	.9110	.9102	.9097	.9093	.9084
.0005	.9056	.9050	.9043	.9036	.9032	.9028	.9020	.9012	.9003	.8998	.8994	.8984
.0006	.8973	.8966	.8959	.8951	.8946	.8943	.8934	.8925	.8916	.8910	.8906	.8895
.0007	.8897	.8890	.8882	.8874	.8869	.8865	.8856	.8846	.8836	.8830	.8825	.8814
.0008	.8828	.8820	.8812	.8803	.8798	.8794	.8784	.8774	.8763	.8756	.8752	.8740
.0009	.8763	.8755	.8746	.8737	.8732	.8727	.8717	.8706	.8695	.8688	.8683	.8670
.0010	.8703	.8694	.8685	.8676	.8670	.8665	.8655	.8643	.8631	.8624	.8619	.8606
.0020	.8236	.8224	.8213	.8200	.8192	.8186	.8172	.8158	.8142	.8133	.8126	.8109
.0030	.7902	.7889	.7875	.7860	.7851	.7844	.7828	.7811	.7793	.7782	.7774	.7754
.0040	.7635	.7621	.7605	.7590	.7579	.7572	.7554	.7535	.7515	.7503	.7495	.7473
.0050	.7411	.7395	.7379	.7362	.7351	.7343	.7324	.7304	.7282	.7269	.7260	.7236
.0060	.7216	.7200	.7183	.7165	.7153	.7145	.7124	.7103	.7080	.7067	.7057	.7032
.0070	.7044	.7027	.7009	.6990	.6978	.6969	.6948	.6926	.6902	.6887	.6877	.6851
.0080	.6889	.6871	.6853	.6833	.6820	.6811	.6789	.6766	.6741	.6726	.6716	.6689
.0090	.6748	.6730	.6710	.6690	.6677	.6668	.6645	.6621	.6596	.6580	.6570	.6542
.0100	.6618	.6599	.6580	.6559	.6545	.6536	.6513	.6488	.6462	.6446	.6435	.6407
.0200	.5695	.5673	.5650	.5626	.5611	.5600	.5573	.5545	.5514	.5496	.5484	.5451
.0300	.5111	.5087	.5063	.5038	.5021	.5010	.4981	.4951	.4920	.4900	.4887	.4852
.0400	.4685	.4661	.4636	.4610	.4593	.4581	.4552	.4522	.4489	.4470	.4456	.4421
.0500	.4353	.4329	.4304	.4277	.4260	.4248	.4219	.4188	.4155	.4135	.4122	.4086
.0600	.4083	.4059	.4033	.4007	.3990	.3978	.3948	.3917	.3884	.3864	.3851	.3815
.0700	.3857	.3832	.3807	.3780	.3763	.3751	.3722	.3691	.3658	.3638	.3625	.3589
.0800	.3663	.3639	.3613	.3587	.3570	.3558	.3528	.3498	.3465	.3445	.3432	.3396
.0900	.3494	.3470	.3445	.3419	.3402	.3390	.3360	.3330	.3297	.3278	.3265	.3229
.1000	.3346	.3322	.3296	.3270	.3254	.3242	.3213	.3182	.3150	.3131	.3118	.3083

TABLE 43. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9522	.9517	.9511	.9506	.9500	.9494	.9488	.9481	.9475	.9468	.9460
.0002	.9333	.9326	.9319	.9311	.9303	.9295	.9286	.9277	.9268	.9259	.9248
.0003	.9192	.9183	.9175	.9165	.9156	.9146	.9136	.9125	.9114	.9102	.9090
.0004	.9075	.9065	.9055	.9045	.9034	.9023	.9011	.8999	.8987	.8974	.8960
.0005	.8974	.8963	.8952	.8941	.8929	.8917	.8904	.8890	.8876	.8862	.8847
.0006	.8884	.8872	.8861	.8848	.8835	.8822	.8808	.8794	.8779	.8763	.8747
.0007	.8802	.8790	.8777	.8764	.8751	.8736	.8721	.8706	.8690	.8673	.8656
.0008	.8727	.8714	.8701	.8687	.8672	.8657	.8642	.8625	.8608	.8591	.8573
.0009	.8658	.8644	.8630	.8615	.8600	.8584	.8568	.8550	.8533	.8515	.8495
.0010	.8592	.8578	.8563	.8548	.8532	.8516	.8499	.8481	.8462	.8443	.8423
.0020	.8091	.8072	.8053	.8033	.8012	.7991	.7968	.7945	.7921	.7896	.7870
.0030	.7734	.7712	.7690	.7667	.7643	.7618	.7593	.7565	.7538	.7510	.7479
.0040	.7450	.7426	.7402	.7377	.7350	.7323	.7295	.7265	.7235	.7204	.7171
.0050	.7212	.7187	.7161	.7133	.7106	.7076	.7046	.7014	.6982	.6949	.6913
.0060	.7007	.6979	.6952	.6923	.6894	.6863	.6831	.6798	.6764	.6729	.6692
.0070	.6825	.6796	.6768	.6738	.6707	.6675	.6642	.6607	.6571	.6535	.6497
.0080	.6662	.6632	.6603	.6572	.6540	.6506	.6472	.6436	.6399	.6362	.6322
.0090	.6513	.6483	.6453	.6421	.6388	.6354	.6318	.6281	.6244	.6205	.6164
.0100	.6377	.6346	.6315	.6283	.6249	.6214	.6178	.6140	.6101	.6062	.6020
.0200	.5417	.5382	.5346	.5309	.5271	.5231	.5190	.5147	.5104	.5059	.5012
.0300	.4818	.4780	.4743	.4704	.4664	.4622	.4580	.4535	.4490	.4444	.4395
.0400	.4385	.4347	.4309	.4269	.4229	.4186	.4143	.4098	.4052	.4006	.3957
.0500	.4050	.4012	.3973	.3933	.3893	.3850	.3807	.3762	.3716	.3670	.3621
.0600	.3779	.3741	.3702	.3663	.3622	.3580	.3537	.3492	.3446	.3400	.3352
.0700	.3553	.3515	.3477	.3438	.3397	.3355	.3313	.3268	.3223	.3178	.3130
.0800	.3361	.3323	.3285	.3246	.3206	.3165	.3122	.3078	.3034	.2989	.2942
.0900	.3194	.3157	.3120	.3081	.3041	.3000	.2958	.2915	.2871	.2827	.2780
.1000	.3048	.3011	.2974	.2936	.2897	.2856	.2815	.2772	.2729	.2685	.2639

TABLE 44. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9349	.9345	.9340	.9335	.9332	.9330	.9324	.9318	.9312	.9308	.9305	.9298
.0002	.9096	.9090	.9083	.9076	.9072	.9069	.9061	.9053	.9045	.9039	.9036	.9026
.0003	.8907	.8900	.8892	.8884	.8879	.8875	.8866	.8856	.8846	.8840	.8836	.8824
.0004	.8752	.8744	.8735	.8726	.8720	.8716	.8706	.8695	.8683	.8676	.8671	.8658
.0005	.8618	.8609	.8600	.8590	.8583	.8579	.8567	.8555	.8543	.8535	.8530	.8516
.0006	.8500	.8490	.8480	.8469	.8462	.8457	.8445	.8432	.8418	.8410	.8404	.8389
.0007	.8393	.8382	.8371	.8360	.8352	.8347	.8334	.8320	.8306	.8297	.8291	.8275
.0008	.8294	.8283	.8272	.8260	.8252	.8246	.8233	.8218	.8203	.8194	.8187	.8170
.0009	.8203	.8192	.8180	.8167	.8159	.8153	.8139	.8124	.8108	.8098	.8091	.8074
.0010	.8119	.8107	.8094	.8081	.8072	.8066	.8051	.8036	.8019	.8009	.8002	.7983
0020	.7474	.7459	.7443	.7426	.7415	.7407	.7388	.7368	.7347	.7334	.7325	.7302
.0030	.7024	.7006	.6988	.6969	.6957	.6948	.6926	.6904	.6879	.6865	.6855	.6828
.0040	.6671	.6652	.6633	.6612	.6598	.6589	.6566	.6541	.6515	.6499	.6488	.6460
.0050	.6380	.6360	.6339	.6317	.6303	.6292	.6268	.6242	.6214	.6198	.6186	.6156
.0060	.6130	.6109	.6087	.6064	.6050	.6039	.6013	.5987	.5958	.5940	.5928	.5897
.0070	.5912	.5890	.5868	.5844	.5829	.5818	.5791	.5764	.5734	.5716	.5703	.5671
.0080	.5718	.5696	.5672	.5648	.5633	.5621	.5594	.5566	.5535	.5517	.5504	.5471
.0090	.5543	.5521	.5497	.5472	.5456	.5445	.5417	.5388	.5357	.5338	.5325	.5291
.0100	.5384	.5361	.5337	.5312	.5296	.5284	.5256	.5226	.5194	.5176	.5162	.5128
.0200	.4298	.4273	.4247	.4220	.4203	.4190	.4160	.4129	.4095	.4075	.4061	.4024
.0300	.3654	.3629	.3603	.3575	.3558	.3546	.3516	.3484	.3450	.3430	.3417	.3380
.0400	.3207	.3183	.3157	.3130	.3113	.3101	.3071	.3041	.3008	.2988	.2975	.2939
.0500	.2872	.2848	.2823	.2797	.2781	.2769	.2740	.2710	.2678	.2659	.2646	.2612
.0600	.2609	.2586	.2562	.2536	.2520	.2509	.2481	.2452	.2421	.2402	.2390	.2356
.0700	.2395	.2372	.2349	.2324	.2309	.2297	.2270	.2242	.2212	.2194	.2182	.2150
.0800	.2217	.2195	.2172	.2148	.2133	.2122	.2096	.2069	.2040	.2022	.2010	.1979
.0900	.2066	.2044	.2022	.1999	.1984	.1973	.1948	.1922	.1894	.1877	.1865	.1835
.1000	.1935	.1914	.1893	.1870	.1856	.1846	.1821	.1795	.1768	.1752	.1741	.1712

TABLE 44. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9291	.9284	.9276	.9268	.9260	.9251	.9242	.9232	.9222	.9212	.9201
.0002	.9017	.9006	.8996	.8985	.8973	.8961	.8949	.8936	.8922	.8909	.8894
.0003	.8813	.8800	.8788	.8775	.8761	.8747	.8732	.8717	.8701	.8684	.8667
.0004	.8645	.8631	.8617	.8602	.8587	.8571	.8554	.8537	.8519	.8501	.8481
.0005	.8501	.8486	.8470	.8454	.8438	.8420	.8402	.8383	.8363	.8343	.8321
.0006	.8374	.8357	.8341	.8323	.8305	.8286	.8267	.8246	.8225	.8203	.8180
.0007	.8258	.8241	.8223	.8205	.8186	.8165	.8145	.8123	.8101	.8078	.8053
.0008	.8153	.8135	.8116	.8096	.8076	.8055	.8033	.8010	.7987	.7963	.7937
.0009	.8056	.8036	.8017	.7996	.7975	.7953	.7930	.7907	.7882	.7857	.7830
.0010	.7965	.7945	.7924	.7903	.7881	.7858	.7835	.7810	.7784	.7758	.7730
.0020	.7278	.7252	.7227	.7200	.7172	.7143	.7113	.7082	.7050	.7017	.6982
.0030	.6801	.6773	.6744	.6713	.6682	.6649	.6616	.6580	.6544	.6508	.6469
.0040	.6431	.6399	.6368	.6335	.6302	.6267	.6230	.6192	.6154	.6114	.6072
.0050	.6125	.6092	.6059	.6025	.5990	.5952	.5914	.5874	.5834	.5792	.5748
.0060	.5865	.5831	.5797	.5761	.5724	.5685	.5646	.5605	.5563	.5520	.5474
.0070	.5638	.5603	.5568	.5531	.5493	.5453	.5413	.5370	.5327	.5283	.5236
.0080	.5437	.5401	.5365	.5327	.5289	.5248	.5207	.5163	.5119	.5074	.5027
.0090	.5257	.5220	.5183	.5145	.5106	.5064	.5022	.4978	.4933	.4888	.4840
.0100	.5093	.5056	.5019	.4980	.4940	.4898	.4855	.4811	.4766	.4720	.4671
.0200	.3987	.3948	.3909	.3868	.3827	.3783	.3739	.3693	.3646	.3599	.3549
.0300	.3344	.3305	.3266	.3226	.3185	.3142	.3099	.3054	.3008	.2962	.2914
.0400	.2904	.2866	.2828	.2789	.2750	.2708	.2667	.2623	.2579	.2535	.2489
.0500	.2577	.2541	.2505	.2467	.2429	.2389	.2349	.2307	.2265	.2223	.2179
.0600	.2323	.2288	.2253	.2217	.2180	.2142	.2103	.2063	.2023	.1983	.1941
.0700	.2118	.2084	.2050	.2015	.1980	.1943	.1907	.1868	.1830	.1791	.1751
.0800	.1948	.1916	.1883	.1850	.1816	.1780	.1745	.1708	.1671	.1634	.1596
.0900	.1805	.1774	.1742	.1710	.1677	.1643	.1609	.1574	.1538	.1503	.1466
.1000	.1683	.1652	.1622	.1591	.1559	.1526	.1493	.1459	.1425	.1391	.1356

TABLE 45. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9142	.9136	.9130	.9123	.9119	.9116	.9109	.9101	.9093	.9088	.9085	.9076
.0002	.8813	.8805	.8797	.8788	.8782	.8778	.8768	.8758	.8747	.8740	.8735	.8723
.0003	.8570	.8561	.8551	.8540	.8534	.8529	.8517	.8505	.8492	.8484	.8478	.8464
.0004	.8372	.8361	.8350	.8338	.8331	.8326	.8312	.8299	.8284	.8275	.8269	.8252
.0005	.8202	.8190	.8178	.8165	.8157	.8151	.8137	.8122	.8106	.8096	.8089	.8071
.0006	.8051	.8039	.8026	.8012	.8004	.7997	.7982	.7966	.7949	.7938	.7931	.7912
.0007	.7916	.7903	.7889	.7875	.7866	.7859	.7843	.7826	.7807	.7796	.7789	.7769
.0008	.7793	.7779	.7765	.7750	.7740	.7733	.7716	.7698	.7679	.7667	.7659	.7638
.0009	.7679	.7665	.7650	.7634	.7624	.7617	.7599	.7580	.7560	.7548	.7540	.7518
.0010	.7574	.7559	.7543	.7527	.7516	.7509	.7490	.7471	.7450	.7438	.7429	.7406
.0020	.6783	.6764	.6745	.6724	.6711	.6702	.6679	.6655	.6629	.6614	.6603	.6575
.0030	.6243	.6223	.6201	.6179	.6164	.6154	.6128	.6102	.6073	.6056	.6044	.6013
.0040	.5829	.5807	.5784	.5760	.5745	.5733	.5706	.5678	.5648	.5630	.5617	.5584
.0050	.5492	.5469	.5445	.5420	.5404	.5392	.5364	.5335	.5303	.5284	.5271	.5236
.0060	.5208	.5184	.5159	.5133	.5117	.5105	.5076	.5046	.5013	.4994	.4980	.4945
.0070	.4962	.4938	.4912	.4886	.4869	.4857	.4827	.4797	.4763	.4744	.4730	.4694
.0080	.4746	.4721	.4696	.4669	.4652	.4639	.4609	.4578	.4545	.4525	.4511	.4474
.0090	.4553	.4529	.4503	.4476	.4458	.4446	.4416	.4384	.4350	.4330	.4316	.4279
.0100	.4380	.4355	.4329	.4302	.4284	.4272	.4241	.4210	.4176	.4155	.4141	.4104
.0200	.3243	.3218	.3192	.3165	.3148	.3135	.3105	.3074	.3041	.3021	.3007	.2971
.0300	.2612	.2588	.2563	.2538	.2521	.2510	.2481	.2452	.2420	.2401	.2388	.2355
.0400	.2195	.2173	.2150	.2125	.2110	.2099	.2072	.2045	.2015	.1998	.1986	.1954
.0500	.1895	.1874	.1852	.1830	.1815	.1805	.1780	.1754	.1726	.1710	.1699	.1669
.0600	.1667	.1647	.1627	.1605	.1592	.1582	.1559	.1534	.1509	.1493	.1483	.1455
.0700	.1488	.1469	.1449	.1429	.1416	.1407	.1385	.1362	.1338	.1324	.1314	.1288
.0800	.1342	.1324	.1306	.1286	.1274	.1266	.1245	.1223	.1201	.1187	.1178	.1154
.0900	.1221	.1204	.1187	.1169	.1157	.1149	.1129	.1109	.1087	.1075	.1066	.1043
.1000	.1119	.1103	.1087	.1070	.1059	.1051	.1032	.1013	.0992	.0980	.0972	.0950

TABLE 45. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9066	.9057	.9046	.9036	.9025	.9014	.9002	.8989	.8977	.8964	.8950
.0002	.8711	.8697	.8684	.8670	.8655	.8639	.8624	.8607	.8590	.8572	.8553
.0003	.8449	.8433	.8417	.8400	.8383	.8365	.8346	.8326	.8306	.8286	.8263
.0004	.8236	.8218	.8200	.8181	.8162	.8142	.8121	.8098	.8076	.8053	.8028
.0005	.8053	.8034	.8014	.7994	.7973	.7951	.7928	.7904	.7879	.7854	.7827
.0006	.7893	.7872	.7851	.7829	.7807	.7783	.7758	.7733	.7706	.7679	.7651
.0007	.7748	.7726	.7704	.7681	.7657	.7632	.7606	.7579	.7551	.7523	.7493
.0008	.7617	.7594	.7570	.7546	.7521	.7495	.7468	.7439	.7410	.7381	.7349
.0009	.7495	.7472	.7447	.7422	.7396	.7369	.7341	.7311	.7281	.7250	.7217
.0010	.7383	.7358	.7333	.7307	.7280	.7252	.7223	.7192	.7161	.7129	.7095
.0020	.6546	.6516	.6485	.6453	.6420	.6385	.6350	.6312	.6274	.6235	.6194
.0030	.5981	.5948	.5914	.5878	.5842	.5804	.5765	.5724	.5682	.5639	.5594
.0040	.5550	.5515	.5479	.5441	.5403	.5363	.5321	.5278	.5234	.5190	.5142
.0050	.5202	.5165	.5127	.5089	.5049	.5007	.4964	.4920	.4875	.4829	.4780
.0060	.4909	.4871	.4833	.4793	.4753	.4710	.4666	.4621	.4575	.4528	.4478
.0070	.4658	.4619	.4580	.4540	.4499	.4455	.4411	.4365	.4318	.4271	.4221
.0080	.4438	.4399	.4359	.4319	.4277	.4233	.4189	.4142	.4095	.4048	.3997
.0090	.4242	.4203	.4164	.4123	.4081	.4037	.3992	.3945	.3898	.3850	.3800
.0100	.4067	.4028	.3988	.3947	.3905	.3861	.3816	.3770	.3722	.3674	.3624
.0200	.2935	.2897	.2858	.2819	.2778	.2736	.2694	.2649	.2605	.2560	.2513
.0300	.2321	.2285	.2249	.2213	.2175	.2136	.2097	.2057	.2016	.1975	.1932
.0400	.1923	.1890	.1857	.1823	.1788	.1752	.1716	.1679	.1642	.1604	.1565
.0500	.1640	.1609	.1579	.1547	.1515	.1482	.1449	.1415	.1381	.1347	.1311
.0600	.1428	.1399	.1371	.1342	.1312	.1281	.1251	.1219	.1188	.1156	.1123
.0700	.1263	.1236	.1209	.1182	.1154	.1126	.1097	.1068	.1039	.1010	.0979
.0800	.1130	.1104	.1079	.1054	.1028	.1001	.0975	.0948	.0921	.0893	.0865
.0900	.1020	.0997	.0973	.0949	.0925	.0900	.0875	.0850	.0824	.0799	.0773
.1000	.0929	.0907	.0885	.0862	.0839	.0816	.0792	.0768	.0745	.0721	.0697

TABLE 46. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9040	.9033	.9027	.9019	.9015	.9011	.9003	.8995	.8986	.8980	.8976	.8966
.0002	.8675	.8666	.8657	.8647	.8641	.8636	.8625	.8614	.8602	.8594	.8589	.8575
.0003	.8406	.8396	.8385	.8374	.8366	.8361	.8348	.8335	.8320	.8311	.8305	.8289
.0004	.8188	.8176	.8164	.8151	.8143	.8137	.8123	.8108	.8091	.8081	.8075	.8057
.0005	.8001	.7988	.7975	.7961	.7952	.7946	.7930	.7913	.7896	.7885	.7878	.7858
.0006	.7836	.7823	.7809	.7794	.7784	.7777	.7760	.7743	.7724	.7712	.7704	.7684
.0007	.7688	.7674	.7659	.7643	.7633	.7626	.7608	.7590	.7570	.7558	.7549	.7527
.0008	.7554	.7539	.7523	.7507	.7496	.7488	.7470	.7450	.7429	.7417	.7408	.7385
.0009	.7430	.7414	.7398	.7381	.7370	.7362	.7342	.7322	.7300	.7287	.7278	.7254
.0010	.7315	.7299	.7282	.7264	.7253	.7244	.7224	.7204	.7181	.7167	.7158	.7133
.0020	.6461	.6442	.6421	.6399	.6385	.6375	.6350	.6325	.6297	.6281	.6269	.6239
.0030	.5886	.5865	.5842	.5818	.5802	.5791	.5764	.5736	.5706	.5688	.5675	.5642
.0040	.5449	.5426	.5402	.5376	.5360	.5348	.5320	.5290	.5259	.5240	.5226	.5192
.0050	.5096	.5072	.5047	.5020	.5004	.4991	.4962	.4932	.4899	.4879	.4865	.4830
.0060	.4800	.4775	.4750	.4723	.4706	.4693	.4663	.4632	.4599	.4578	.4565	.4528
.0070	.4546	.4521	.4495	.4468	.4450	.4438	.4407	.4376	.4342	.4321	.4307	.4271
.0080	.4324	.4299	.4272	.4245	.4227	.4215	.4184	.4152	.4118	.4098	.4083	.4046
.0090	.4127	.4102	.4075	.4048	.4030	.4017	.3987	.3955	.3920	.3900	.3886	.3849
.0100	.3951	.3926	.3899	.3871	.3854	.3841	.3810	.3778	.3744	.3723	.3709	.3672
.0200	.2818	.2793	.2768	.2741	.2724	.2712	.2683	.2653	.2620	.2601	.2588	.2553
.0300	.2208	.2186	.2162	.2138	.2122	.2111	.2084	.2057	.2027	.2009	.1997	.1965
.0400	.1816	.1795	.1774	.1751	.1737	.1727	.1702	.1677	.1650	.1633	.1622	.1593
.0500	.1540	.1520	.1500	.1480	.1466	.1457	.1434	.1411	.1386	.1371	.1361	.1335
.0600	.1333	.1315	.1296	.1277	.1265	.1256	.1236	.1214	.1191	.1177	.1168	.1144
.0700	.1172	.1156	.1138	.1121	.1109	.1101	.1082	.1062	.1041	.1028	.1019	.0997
.0800	.1044	.1028	.1012	.0996	.0985	.0978	.0959	.0941	.0921	.0909	.0901	.0881
.0900	.0939	.0924	.0909	.0894	.0884	.0877	.0860	.0842	.0824	.0813	.0806	.0786
.1000	.0851	.0838	.0823	.0809	.0799	.0793	.0777	.0761	.0744	.0733	.0726	.0708

TABLE 46. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8956	.8945	.8934	.8922	.8910	.8897	.8884	.8871	.8856	.8842	.8826
.0002	.8562	.8547	.8532	.8516	.8500	.8483	.8465	.8447	.8428	.8409	.8388
.0003	.8273	.8256	.8238	.8219	.8200	.8180	.8160	.8138	.8116	.8093	.8069
.0004	.8038	.8019	.7999	.7979	.7957	.7935	.7912	.7888	.7863	.7838	.7811
.0005	.7838	.7817	.7796	.7773	.7750	.7726	.7701	.7675	.7648	.7620	.7591
.0006	.7663	.7640	.7617	.7593	.7569	.7543	.7516	.7488	.7459	.7430	.7399
.0007	.7505	.7481	.7457	.7432	.7406	.7378	.7350	.7321	.7291	.7260	.7227
.0008	.7362	.7337	.7312	.7285	.7258	.7229	.7200	.7169	.7138	.7106	.7071
.0009	.7230	.7204	.7178	.7151	.7122	.7093	.7062	.7030	.6998	.6964	.6929
.0010	.7108	.7081	.7054	.7026	.6997	.6966	.6935	.6902	.6868	.6834	.6797
.0020	.6209	.6176	.6143	.6109	.6074	.6037	.5999	.5959	.5919	.5878	.5834
.0030	.5609	.5574	.5538	.5501	.5462	.5422	.5381	.5338	.5294	.5250	.5202
.0040	.5157	.5119	.5082	.5043	.5003	.4961	.4918	.4873	.4827	.4781	.4732
.0050	.4794	.4755	.4717	.4677	.4635	.4592	.4548	.4502	.4456	.4408	.4358
.0060	.4491	.4452	.4413	.4372	.4331	.4287	.4242	.4196	.4149	.4101	.4050
.0070	.4233	.4194	.4154	.4113	.4071	.4027	.3982	.3935	.3888	.3840	.3789
.0080	.4009	.3969	.3930	.3888	.3846	.3802	.3757	.3710	.3663	.3615	.3564
.0090	.3811	.3771	.3732	.3690	.3648	.3604	.3559	.3512	.3465	.3417	.3367
.0100	.3635	.3595	.3555	.3514	.3472	.3428	.3383	.3337	.3290	.3242	.3192
.0200	.2518	.2481	.2444	.2406	.2367	.2327	.2286	.2244	.2202	.2159	.2114
.0300	.1934	.1900	.1867	.1832	.1798	.1762	.1725	.1688	.1650	.1612	.1573
.0400	.1565	.1534	.1504	.1473	.1442	.1409	.1377	.1343	.1310	.1276	.1242
.0500	.1308	.1281	.1253	.1225	.1197	.1168	.1138	.1108	.1078	.1048	.1017
.0600	.1120	.1094	.1069	.1044	.1018	.0991	.0965	.0937	.0910	.0883	.0855
.0700	.0975	.0951	.0928	.0905	.0881	.0857	.0832	.0807	.0783	.0758	.0733
.0800	.0860	.0838	.0817	.0795	.0774	.0751	.0729	.0706	.0683	.0661	.0637
.0900	.0767	.0747	.0727	.0707	.0687	.0666	.0645	.0624	.0603	.0583	.0561
.1000	.0690	.0672	.0653	.0634	.0616	.0596	.0577	.0557	.0538	.0519	.0499

TABLE 47. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8741	.8733	.8724	.8714	.8708	.8704	.8694	.8683	.8671	.8664	.8659	.8646
.0002	.8273	.8262	.8250	.8238	.8230	.8224	.8211	.8196	.8180	.8171	.8164	.8147
.0003	.7934	.7921	.7907	.7893	.7883	.7877	.7861	.7844	.7825	.7814	.7807	.7787
.0004	.7660	.7645	.7630	.7614	.7604	.7597	.7579	.7560	.7540	.7527	.7519	.7497
.0005	.7428	.7412	.7396	.7378	.7367	.7359	.7340	.7320	.7298	.7285	.7275	.7251
.0006	.7225	.7208	.7191	.7172	.7160	.7152	.7131	.7110	.7087	.7073	.7063	.7038
.0007	.7043	.7026	.7008	.6988	.6976	.6967	.6946	.6923	.6899	.6884	.6874	.6847
.0008	.6879	.6861	.6842	.6822	.6809	.6800	.6778	.6754	.6729	.6714	.6703	.6675
.0009	.6729	.6711	.6691	.6670	.6657	.6647	.6624	.6600	.6574	.6558	.6547	.6518
.0010	.6591	.6572	.6551	.6530	.6516	.6506	.6482	.6457	.6430	.6414	.6403	.6374
.0020	.5586	.5563	.5539	.5514	.5498	.5486	.5458	.5429	.5398	.5379	.5366	.5331
.0030	.4933	.4909	.4883	.4857	.4839	.4827	.4797	.4766	.4733	.4713	.4699	.4663
.0040	.4451	.4426	.4399	.4372	.4354	.4341	.4311	.4279	.4244	.4224	.4210	.4173
.0050	.4070	.4045	.4018	.3990	.3972	.3959	.3929	.3896	.3862	.3841	.3827	.3789
.0060	.3758	.3732	.3706	.3678	.3660	.3647	.3616	.3584	.3549	.3529	.3515	.3477
.0070	.3495	.3470	.3443	.3415	.3397	.3385	.3354	.3322	.3288	.3267	.3253	.3216
.0080	.3269	.3244	.3218	.3190	.3173	.3160	.3129	.3098	.3064	.3043	.3029	.2993
.0090	.3073	.3048	.3021	.2994	.2977	.2964	.2934	.2903	.2869	.2849	.2835	.2799
.0100	.2899	.2874	.2848	.2821	.2804	.2792	.2762	.2731	.2698	.2679	.2665	.2629
.0200	.1847	.1826	.1804	.1781	.1766	.1756	.1731	.1704	.1677	.1660	.1649	.1619
.0300	.1335	.1317	.1298	.1278	.1266	.1257	.1236	.1214	.1191	.1177	.1167	.1143
.0400	.1029	.1013	.0997	.0980	.0969	.0962	.0943	.0925	.0905	.0893	.0885	.0864
.0500	.0825	.0811	.0797	.0783	.0773	.0767	.0751	.0735	.0717	.0707	.0700	.0682
.0600	.0681	.0669	.0656	.0643	.0635	.0629	.0615	.0601	.0586	.0577	.0571	.0555
.0700	.0574	.0563	.0552	.0540	.0533	.0528	.0515	.0503	.0489	.0482	.0476	.0462
.0800	.0491	.0482	.0472	.0461	.0455	.0450	.0439	.0428	.0416	.0409	.0404	.0392
.0900	.0427	.0418	.0409	.0399	.0394	.0389	.0379	.0369	.0359	.0352	.0348	.0337
.1000	.0374	.0366	.0358	.0350	.0344	.0341	.0332	.0322	.0313	.0307	.0303	.0293

TABLE 47. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8633	.8619	.8604	.8589	.8574	.8558	.8541	.8523	.8505	.8487	.8467
.0002	.8130	.8111	.8092	.8072	.8052	.8030	.8008	.7985	.7961	.7937	.7911
.0003	.7766	.7744	.7722	.7699	.7676	.7651	.7625	.7598	.7570	.7542	.7512
.0004	.7474	.7450	.7426	.7400	.7374	.7346	.7318	.7288	.7257	.7226	.7193
.0005	.7227	.7201	.7175	.7147	.7119	.7089	.7059	.7027	.6994	.6960	.6925
.0006	.7012	.6984	.6956	.6927	.6897	.6866	.6834	.6800	.6765	.6730	.6692
.0007	.6820	.6791	.6762	.6732	.6700	.6667	.6634	.6598	.6562	.6525	.6486
.0008	.6647	.6617	.6587	.6555	.6523	.6488	.6453	.6417	.6379	.6341	.6300
.0009	.6489	.6458	.6427	.6394	.6361	.6325	.6289	.6251	.6213	.6173	.6131
.0010	.6344	.6312	.6280	.6246	.6212	.6175	.6138	.6099	.6060	.6019	.5976
.0020	.5297	.5260	.5222	.5184	.5144	.5102	.5060	.5015	.4970	.4924	.4875
.0030	.4626	.4587	.4548	.4507	.4465	.4421	.4377	.4330	.4283	.4235	.4184
.0040	.4135	.4095	.4055	.4014	.3971	.3927	.3882	.3835	.3787	.3738	.3687
.0050	.3752	.3712	.3672	.3630	.3587	.3543	.3498	.3451	.3403	.3355	.3304
.0060	.3440	.3400	.3360	.3319	.3276	.3232	.3188	.3141	.3094	.3047	.2997
.0070	.3179	.3139	.3100	.3059	.3017	.2974	.2930	.2884	.2838	.2791	.2742
.0080	.2956	.2917	.2878	.2838	.2797	.2754	.2711	.2666	.2621	.2575	.2527
.0090	.2763	.2725	.2687	.2647	.2607	.2565	.2522	.2478	.2434	.2389	.2342
.0100	.2594	.2556	.2519	.2480	.2440	.2399	.2358	.2314	.2271	.2227	.2181
.0200	.1590	.1559	.1528	.1496	.1464	.1431	.1398	.1364	.1329	.1295	.1259
.0300	.1118	.1092	.1067	.1041	.1015	.0987	.0960	.0933	.0905	.0878	.0849
.0400	.0843	.0821	.0800	.0778	.0756	.0734	.0711	.0688	.0665	.0643	.0619
.0500	.0664	.0646	.0627	.0609	.0590	.0571	.0552	.0532	.0513	.0494	.0475
.0600	.0540	.0523	.0508	.0491	.0475	.0459	.0442	.0426	.0409	.0393	.0377
.0700	.0449	.0434	.0420	.0406	.0392	.0378	.0363	.0349	.0335	.0321	.0307
.0800	.0380	.0367	.0355	.0342	.0330	.0317	.0304	.0292	.0279	.0267	.0255
.0900	.0326	.0315	.0304	.0292	.0281	.0270	.0259	.0248	.0237	.0226	.0215
.1000	.0283	.0273	.0263	.0253	.0243	.0233	.0223	.0213	.0203	.0194	.0184

TABLE 48. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8357	.8347	.8336	.8324	.8316	.8311	.8297	.8284	.8269	.8260	.8253	.8237
.0002	.7767	.7753	.7738	.7723	.7713	.7706	.7688	.7670	.7651	.7639	.7631	.7609
.0003	.7345	.7329	.7312	.7294	.7283	.7274	.7254	.7234	.7211	.7198	.7188	.7164
.0004	.7009	.6991	.6972	.6953	.6941	.6932	.6910	.6887	.6862	.6847	.6837	.6810
.0005	.6727	.6708	.6688	.6667	.6654	.6644	.6621	.6597	.6570	.6555	.6544	.6515
.0006	.6483	.6463	.6442	.6420	.6406	.6396	.6371	.6346	.6318	.6302	.6290	.6260
.0007	.6267	.6246	.6224	.6202	.6187	.6177	.6151	.6124	.6096	.6078	.6066	.6035
.0008	.6073	.6052	.6029	.6006	.5991	.5980	.5953	.5926	.5896	.5879	.5866	.5834
.0009	.5897	.5875	.5852	.5828	.5812	.5801	.5774	.5746	.5716	.5697	.5685	.5652
.0010	.5736	.5714	.5690	.5665	.5649	.5638	.5610	.5582	.5550	.5532	.5519	.5485
.0020	.4600	.4575	.4549	.4522	.4504	.4491	.4461	.4429	.4395	.4374	.4360	.4323
.0030	.3898	.3872	.3846	.3817	.3800	.3787	.3755	.3723	.3688	.3667	.3653	.3615
.0040	.3398	.3373	.3346	.3318	.3300	.3287	.3256	.3224	.3190	.3169	.3155	.3118
.0050	.3016	.2991	.2965	.2937	.2920	.2907	.2877	.2846	.2812	.2792	.2778	.2742
.0060	.2712	.2687	.2662	.2635	.2618	.2606	.2576	.2546	.2513	.2494	.2480	.2445
.0070	.2462	.2438	.2413	.2387	.2371	.2359	.2330	.2301	.2269	.2250	.2237	.2203
.0080	.2252	.2229	.2205	.2180	.2164	.2152	.2125	.2096	.2065	.2047	.2035	.2002
.0090	.2073	.2051	.2027	.2003	.1988	.1976	.1950	.1922	.1892	.1875	.1863	.1831
.0100	.1919	.1897	.1874	.1851	.1836	.1825	.1799	.1772	.1744	.1727	.1715	.1685
.0200	.1052	.1036	.1019	.1002	.0991	.0983	.0964	.0945	.0925	.0913	.0904	.0883
.0300	.0682	.0670	.0657	.0644	.0636	.0630	.0616	.0601	.0586	.0577	.0570	.0554
.0400	.0482	.0472	.0462	.0452	.0445	.0441	.0429	.0418	.0406	.0399	.0394	.0382
.0500	.0359	.0351	.0343	.0335	.0329	.0326	.0317	.0308	.0298	.0292	.0289	.0279
.0600	.0278	.0271	.0265	.0258	.0253	.0250	.0243	.0235	.0228	.0223	.0220	.0212
.0700	.0221	.0216	.0210	.0204	.0201	.0198	.0192	.0186	.0179	.0175	.0173	.0166
.0800	.0180	.0175	.0170	.0166	.0162	.0160	.0155	.0150	.0144	.0141	.0139	.0133
.0900	.0149	.0145	.0141	.0137	.0134	.0132	.0128	.0123	.0118	.0115	.0114	.0109
.1000	.0125	.0122	.0118	.0114	.0112	.0110	.0107	.0103	.0098	.0096	.0094	.0090

TABLE 48. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8220	.8202	.8184	.8165	.8145	.8125	.8103	.8081	.8058	.8035	.8010
.0002	.7588	.7564	.7541	.7516	.7491	.7464	.7437	.7408	.7378	.7348	.7316
.0003	.7139	.7112	.7085	.7057	.7028	.6997	.6966	.6933	.6899	.6865	.6828
.0004	.6783	.6754	.6724	.6693	.6662	.6628	.6594	.6559	.6522	.6485	.6445
.0005	.6486	.6455	.6423	.6390	.6357	.6321	.6285	.6247	.6208	.6169	.6126
.0006	.6229	.6197	.6164	.6129	.6094	.6057	.6019	.5979	.5939	.5897	.5853
.0007	.6003	.5970	.5935	.5900	.5863	.5825	.5785	.5744	.5702	.5659	.5614
.0008	.5801	.5766	.5731	.5694	.5657	.5617	.5577	.5534	.5491	.5447	.5401
.0009	.5618	.5582	.5546	.5509	.5470	.5430	.5388	.5345	.5301	.5256	.5209
.0010	.5451	.5414	.5378	.5339	.5300	.5259	.5217	.5173	.5128	.5082	.5034
.0020	.4285	.4246	.4206	.4164	.4121	.4077	.4032	.3984	.3936	.3888	.3836
.0030	.3578	.3537	.3497	.3455	.3413	.3368	.3323	.3276	.3228	.3180	.3130
.0040	.3081	.3041	.3002	.2961	.2919	.2876	.2832	.2786	.2740	.2693	.2644
.0050	.2706	.2667	.2629	.2589	.2549	.2507	.2465	.2420	.2376	.2331	.2284
.0060	.2410	.2373	.2336	.2298	.2259	.2218	.2178	.2135	.2093	.2050	.2005
.0070	.2169	.2134	.2098	.2061	.2024	.1985	.1946	.1905	.1865	.1824	.1781
.0080	.1969	.1935	.1900	.1865	.1829	.1792	.1755	.1716	.1677	.1638	.1598
.0090	.1800	.1767	.1734	.1700	.1665	.1629	.1594	.1557	.1520	.1483	.1444
.0100	.1654	.1622	.1591	.1558	.1525	.1491	.1456	.1421	.1386	.1350	.1313
.0200	.0861	.0839	.0817	.0794	.0772	.0749	.0726	.0702	.0679	.0655	.0631
.0300	.0539	.0522	.0506	.0490	.0473	.0456	.0440	.0423	.0406	.0390	.0373
.0400	.0370	.0357	.0345	.0332	.0320	.0307	.0295	.0282	.0270	.0257	.0245
.0500	.0269	.0259	.0249	.0239	.0230	.0220	.0210	.0200	.0191	.0181	.0172
.0600	.0204	.0196	.0188	.0180	.0172	.0164	.0156	.0149	.0141	.0134	.0126
.0700	.0159	.0153	.0146	.0140	.0133	.0127	.0120	.0114	.0108	.0102	.0096
.0800	.0128	.0122	.0117	.0111	.0106	.0100	.0095	.0090	.0085	.0080	.0075
.0900	.0104	.0099	.0095	.0090	.0086	.0081	.0077	.0072	.0068	.0064	.0060
.1000	.0086	.0082	.0078	.0074	.0070	.0067	.0063	.0059	.0055	.0052	.0049

TABLE 49. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9888	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881	.9880
.0002	.9843	.9842	.9841	.9840	.9839	.9839	.9837	.9836	.9835	.9834	.9833	.9832
.0003	.9809	.9808	.9806	.9805	.9804	.9803	.9802	.9800	.9798	.9797	.9797	.9795
.0004	.9780	.9779	.9777	.9776	.9775	.9774	.9772	.9770	.9768	.9767	.9766	.9764
.0005	.9755	.9754	.9752	.9750	.9749	.9748	.9746	.9744	.9742	.9740	.9739	.9737
.0006	.9733	.9731	.9729	.9727	.9726	.9725	.9723	.9720	.9718	.9716	.9715	.9713
.0007	.9712	.9710	.9708	.9706	.9705	.9704	.9701	.9699	.9696	.9695	.9694	.9691
.0008	.9693	.9691	.9689	.9686	.9685	.9684	.9682	.9679	.9676	.9674	.9673	.9670
.0009	.9675	.9673	.9671	.9668	.9667	.9666	.9663	.9660	.9657	.9656	.9654	.9651
.0010	.9659	.9656	.9654	.9651	.9650	.9649	.9646	.9643	.9640	.9638	.9637	.9633
.0020	.9526	.9523	.9520	.9516	.9514	.9512	.9509	.9505	.9501	.9498	.9496	.9492
.0030	.9428	.9424	.9420	.9416	.9414	.9412	.9407	.9402	.9397	.9394	.9392	.9387
.0040	.9348	.9343	.9339	.9334	.9331	.9329	.9324	.9318	.9313	.9309	.9307	.9301
.0050	.9278	.9273	.9268	.9263	.9260	.9258	.9252	.9246	.9240	.9236	.9233	.9227
.0060	.9217	.9212	.9206	.9201	.9197	.9195	.9188	.9182	.9175	.9171	.9168	.9161
.0070	.9161	.9156	.9150	.9144	.9140	.9138	.9131	.9124	.9117	.9113	.9110	.9102
.0080	.9110	.9105	.9099	.9092	.9088	.9085	.9079	.9071	.9064	.9059	.9056	.9048
.0090	.9063	.9057	.9051	.9044	.9040	.9037	.9030	.9022	.9014	.9010	.9006	.8998
.0100	.9020	.9013	.9007	.9000	.8995	.8992	.8985	.8977	.8969	.8963	.8960	.8951
.0200	.8687	.8679	.8670	.8661	.8656	.8652	.8642	.8631	.8621	.8614	.8610	.8598
.0300	.8455	.8446	.8436	.8425	.8419	.8414	.8403	.8391	.8379	.8371	.8366	.8353
.0400	.8273	.8263	.8252	.8241	.8234	.8228	.8216	.8203	.8190	.8181	.8176	.8161
.0500	.8123	.8112	.8100	.8088	.8080	.8075	.8062	.8048	.8033	.8024	.8018	.8002
.0600	.7994	.7982	.7970	.7957	.7949	.7943	.7929	.7914	.7899	.7890	.7883	.7867
.0700	.7880	.7868	.7855	.7842	.7834	.7828	.7813	.7798	.7782	.7772	.7765	.7748
.0800	.7780	.7767	.7753	.7739	.7731	.7725	.7710	.7694	.7677	.7667	.7660	.7642
.0900	.7688	.7675	.7662	.7647	.7638	.7632	.7616	.7600	.7583	.7572	.7565	.7547
.1000	.7605	.7592	.7578	.7563	.7554	.7547	.7531	.7514	.7497	.7486	.7479	.7460

TABLE 49. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9878	.9877	.9875	.9874	.9873	.9871	.9870	.9868	.9867	.9865
.0002	.9830	.9828	.9827	.9825	.9823	.9821	.9819	.9817	.9815	.9813	.9811
.0003	.9793	.9791	.9789	.9787	.9784	.9782	.9780	.9777	.9775	.9772	.9769
.0004	.9762	.9759	.9757	.9755	.9752	.9749	.9747	.9744	.9741	.9738	.9735
.0005	.9735	.9732	.9729	.9727	.9724	.9721	.9718	.9715	.9711	.9708	.9705
.0006	.9710	.9707	.9704	.9702	.9698	.9695	.9692	.9689	.9685	.9681	.9677
.0007	.9688	.9685	.9682	.9679	.9675	.9672	.9668	.9665	.9661	.9657	.9653
.0008	.9667	.9664	.9661	.9657	.9654	.9650	.9646	.9643	.9638	.9634	.9630
.0009	.9648	.9645	.9641	.9638	.9634	.9630	.9626	.9622	.9618	.9613	.9609
.0010	.9630	.9626	.9623	.9619	.9615	.9611	.9607	.9602	.9598	.9593	.9588
.0020	.9487	.9482	.9477	.9472	.9467	.9461	.9455	.9449	.9443	.9437	.9430
.0030	.9381	.9375	.9369	.9363	.9357	.9350	.9343	.9336	.9329	.9321	.9313
.0040	.9294	.9288	.9281	.9274	.9267	.9259	.9251	.9243	.9235	.9226	.9217
.0050	.9220	.9212	.9205	.9197	.9189	.9181	.9173	.9164	.9154	.9145	.9135
.0060	.9154	.9146	.9138	.9129	.9121	.9112	.9103	.9093	.9083	.9073	.9062
.0070	.9094	.9085	.9077	.9068	.9059	.9049	.9040	.9029	.9019	.9008	.8997
.0080	.9039	.9030	.9021	.9012	.9002	.8992	.8982	.8971	.8960	.8949	.8937
.0090	.8989	.8980	.8970	.8960	.8950	.8940	.8929	.8918	.8906	.8894	.8881
.0100	.8942	.8932	.8922	.8912	.8901	.8891	.8879	.8868	.8855	.8843	.8830
.0200	.8586	.8573	.8561	.8547	.8534	.8520	.8505	.8490	.8474	.8458	.8441
.0300	.8339	.8324	.8310	.8295	.8279	.8263	.8246	.8228	.8210	.8192	.8172
.0400	.8146	.8130	.8114	.8097	.8080	.8062	.8044	.8025	.8005	.7985	.7963
.0500	.7986	.7969	.7952	.7934	.7916	.7897	.7877	.7856	.7835	.7814	.7791
.0600	.7850	.7832	.7814	.7795	.7775	.7755	.7735	.7713	.7691	.7668	.7644
.0700	.7730	.7711	.7692	.7673	.7652	.7632	.7610	.7587	.7564	.7541	.7515
.0800	.7624	.7604	.7585	.7564	.7543	.7522	.7499	.7476	.7452	.7427	.7401
.0900	.7528	.7508	.7488	.7466	.7445	.7422	.7400	.7375	.7351	.7326	.7299
.1000	.7440	.7420	.7399	.7377	.7355	.7332	.7309	.7284	.7259	.7233	.7205

TABLE 50. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9778	.9777	.9775	.9773	.9772	.9772	.9770	.9768	.9766	.9765	.9764	.9762
.0002	.9689	.9687	.9685	.9682	.9681	.9680	.9677	.9675	.9672	.9670	.9669	.9666
.0003	.9622	.9619	.9616	.9613	.9612	.9610	.9607	.9604	.9601	.9599	.9597	.9594
.0004	.9565	.9562	.9559	.9556	.9554	.9553	.9549	.9545	.9542	.9539	.9538	.9533
.0005	.9516	.9513	.9510	.9506	.9504	.9502	.9498	.9494	.9490	.9487	.9486	.9481
.0006	.9473	.9469	.9465	.9461	.9459	.9457	.9453	.9448	.9444	.9441	.9439	.9434
.0007	.9433	.9429	.9425	.9420	.9418	.9416	.9411	.9407	.9402	.9399	.9397	.9391
.0008	.9396	.9391	.9387	.9383	.9380	.9378	.9373	.9368	.9363	.9360	.9357	.9352
.0009	.9361	.9357	.9352	.9348	.9345	.9343	.9338	.9332	.9327	.9323	.9321	.9315
.0010	.9329	.9324	.9320	.9315	.9312	.9309	.9304	.9298	.9293	.9289	.9286	.9280
.0020	.9075	.9069	.9063	.9056	.9052	.9049	.9042	.9034	.9026	.9021	.9018	.9009
.0030	.8889	.8882	.8874	.8866	.8861	.8858	.8849	.8840	.8831	.8825	.8821	.8811
.0040	.8738	.8730	.8721	.8712	.8707	.8703	.8693	.8683	.8673	.8666	.8662	.8650
.0050	.8609	.8600	.8590	.8581	.8575	.8570	.8560	.8549	.8537	.8530	.8525	.8513
.0060	.8495	.8485	.8475	.8465	.8459	.8454	.8443	.8431	.8419	.8411	.8406	.8392
.0070	.8393	.8383	.8372	.8361	.8354	.8349	.8338	.8325	.8312	.8304	.8298	.8284
.0080	.8300	.8289	.8278	.8267	.8260	.8254	.8242	.8229	.8215	.8207	.8201	.8186
.0090	.8215	.8203	.8192	.8180	.8172	.8167	.8154	.8140	.8126	.8117	.8111	.8096
.0100	.8135	.8124	.8112	.8099	.8092	.8086	.8073	.8058	.8044	.8034	.8028	.8012
.0200	.7546	.7532	.7517	.7501	.7492	.7485	.7468	.7450	.7432	.7420	.7413	.7392
.0300	.7149	.7133	.7116	.7098	.7088	.7080	.7061	.7041	.7020	.7008	.6999	.6977
.0400	.6845	.6827	.6810	.6791	.6779	.6771	.6751	.6729	.6707	.6693	.6684	.6660
.0500	.6598	.6580	.6561	.6541	.6529	.6520	.6499	.6476	.6453	.6439	.6429	.6404
.0600	.6390	.6371	.6351	.6331	.6318	.6309	.6287	.6264	.6240	.6225	.6214	.6188
.0700	.6210	.6191	.6171	.6149	.6137	.6127	.6104	.6080	.6055	.6040	.6030	.6003
.0800	.6052	.6032	.6012	.5990	.5977	.5967	.5944	.5919	.5894	.5878	.5867	.5840
.0900	.5911	.5891	.5870	.5848	.5834	.5824	.5801	.5776	.5750	.5734	.5723	.5695
.1000	.5784	.5763	.5742	.5720	.5706	.5696	.5672	.5647	.5620	.5604	.5593	.5565

TABLE 50. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9759	.9757	.9755	.9752	.9750	.9747	.9744	.9741	.9738	.9735	.9732
.0002	.9663	.9659	.9656	.9653	.9649	.9645	.9642	.9638	.9633	.9629	.9625
.0003	.9590	.9586	.9582	.9578	.9573	.9569	.9564	.9559	.9554	.9549	.9544
.0004	.9529	.9525	.9520	.9515	.9510	.9505	.9500	.9494	.9488	.9483	.9476
.0005	.9476	.9471	.9466	.9461	.9455	.9449	.9444	.9437	.9431	.9425	.9418
.0006	.9429	.9423	.9418	.9412	.9406	.9400	.9393	.9387	.9380	.9373	.9365
.0007	.9386	.9380	.9374	.9368	.9361	.9354	.9348	.9341	.9333	.9326	.9318
.0008	.9346	.9339	.9333	.9327	.9320	.9313	.9305	.9298	.9290	.9282	.9273
.0009	.9308	.9302	.9295	.9288	.9281	.9274	.9266	.9258	.9250	.9241	.9232
.0010	.9274	.9267	.9260	.9252	.9245	.9237	.9229	.9221	.9212	.9203	.9194
.0020	.9000	.8991	.8982	.8972	.8962	.8951	.8940	.8929	.8917	.8905	.8893
.0030	.8801	.8790	.8778	.8767	.8755	.8742	.8730	.8716	.8703	.8688	.8673
.0040	.8639	.8626	.8614	.8601	.8587	.8573	.8559	.8544	.8529	.8513	.8496
.0050	.8500	.8487	.8473	.8459	.8444	.8429	.8413	.8397	.8380	.8363	.8345
.0060	.8379	.8364	.8350	.8334	.8319	.8303	.8286	.8268	.8250	.8232	.8212
.0070	.8270	.8255	.8239	.8223	.8206	.8189	.8172	.8153	.8134	.8115	.8094
.0080	.8171	.8155	.8139	.8122	.8104	.8086	.8068	.8048	.8028	.8008	.7986
.0090	.8080	.8063	.8046	.8029	.8010	.7992	.7972	.7952	.7931	.7910	.7888
.0100	.7996	.7978	.7961	.7943	.7924	.7904	.7884	.7863	.7842	.7820	.7796
.0200	.7372	.7350	.7329	.7306	.7283	.7258	.7234	.7208	.7181	.7154	.7125
.0300	.6954	.6930	.6905	.6880	.6854	.6827	.6799	.6770	.6741	.6711	.6678
.0400	.6635	.6610	.6583	.6556	.6528	.6500	.6470	.6439	.6408	.6375	.6341
.0500	.6378	.6351	.6323	.6295	.6266	.6236	.6205	.6172	.6139	.6105	.6070
.0600	.6162	.6134	.6105	.6076	.6045	.6014	.5982	.5949	.5915	.5880	.5843
.0700	.5975	.5946	.5917	.5887	.5856	.5824	.5791	.5757	.5722	.5686	.5648
.0800	.5812	.5782	.5753	.5722	.5690	.5657	.5624	.5589	.5553	.5517	.5478
.0900	.5667	.5637	.5606	.5575	.5542	.5509	.5475	.5440	.5403	.5366	.5327
.1000	.5536	.5505	.5475	.5443	.5410	.5376	.5342	.5306	.5269	.5232	.5192

TABLE 51. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9669	.9667	.9664	.9662	.9660	.9659	.9657	.9654	.9651	.9649	.9648	.9645
.0002	.9537	.9534	.9531	.9527	.9525	.9524	.9520	.9516	.9512	.9509	.9507	.9503
.0003	.9438	.9434	.9430	.9426	.9423	.9421	.9417	.9412	.9407	.9404	.9402	.9397
.0004	.9355	.9351	.9346	.9342	.9339	.9337	.9331	.9326	.9320	.9317	.9314	.9308
.0005	.9284	.9279	.9274	.9268	.9265	.9263	.9257	.9251	.9245	.9241	.9238	.9232
.0006	.9219	.9214	.9209	.9203	.9199	.9197	.9191	.9184	.9177	.9173	.9170	.9163
.0007	.9161	.9155	.9150	.9143	.9140	.9137	.9130	.9123	.9116	.9112	.9109	.9101
.0008	.9107	.9101	.9095	.9089	.9085	.9082	.9075	.9067	.9060	.9055	.9052	.9043
.0009	.9057	.9051	.9044	.9038	.9033	.9030	.9023	.9015	.9007	.9002	.8999	.8990
.0010	.9010	.9004	.8997	.8990	.8985	.8982	.8974	.8966	.8958	.8953	.8949	.8940
.0020	.8645	.8636	.8627	.8618	.8612	.8608	.8597	.8587	.8575	.8568	.8563	.8551
.0030	.8381	.8370	.8360	.8349	.8342	.8337	.8325	.8312	.8299	.8291	.8285	.8271
.0040	.8168	.8156	.8144	.8132	.8124	.8119	.8105	.8091	.8077	.8067	.8061	.8045
.0050	.7987	.7975	.7962	.7948	.7940	.7934	.7920	.7904	.7888	.7879	.7872	.7855
.0060	.7830	.7816	.7803	.7788	.7779	.7773	.7758	.7741	.7724	.7714	.7707	.7688
.0070	.7689	.7675	.7661	.7645	.7636	.7629	.7613	.7596	.7578	.7567	.7560	.7540
.0080	.7562	.7547	.7532	.7516	.7507	.7500	.7483	.7465	.7446	.7434	.7427	.7406
.0090	.7445	.7430	.7414	.7398	.7388	.7381	.7363	.7345	.7325	.7313	.7305	.7284
.0100	.7338	.7322	.7306	.7289	.7279	.7271	.7253	.7234	.7214	.7202	.7193	.7172
.0200	.6556	.6537	.6517	.6497	.6485	.6476	.6454	.6431	.6407	.6392	.6382	.6356
.0300	.6044	.6024	.6003	.5980	.5967	.5957	.5933	.5908	.5882	.5866	.5855	.5827
.0400	.5663	.5641	.5619	.5596	.5582	.5571	.5546	.5520	.5493	.5476	.5464	.5435
.0500	.5359	.5337	.5314	.5290	.5276	.5265	.5239	.5212	.5184	.5166	.5155	.5124
.0600	.5108	.5085	.5062	.5037	.5022	.5011	.4985	.4957	.4929	.4911	.4899	.4868
.0700	.4894	.4871	.4847	.4822	.4807	.4796	.4769	.4741	.4712	.4694	.4682	.4651
.0800	.4708	.4685	.4661	.4636	.4621	.4609	.4582	.4554	.4525	.4507	.4494	.4463
.0900	.4545	.4521	.4497	.4472	.4456	.4445	.4418	.4390	.4360	.4342	.4329	.4298
.1000	.4399	.4375	.4351	.4326	.4310	.4299	.4272	.4243	.4214	.4195	.4183	.4151

TABLE 51. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9641	.9638	.9634	.9631	.9627	.9623	.9619	.9614	.9610	.9606	.9601
.0002	.9498	.9494	.9489	.9484	.9478	.9473	.9467	.9461	.9455	.9449	.9442
.0003	.9391	.9385	.9379	.9373	.9367	.9360	.9353	.9346	.9339	.9331	.9323
.0004	.9302	.9295	.9289	.9282	.9274	.9267	.9259	.9251	.9243	.9234	.9225
.0005	.9225	.9217	.9210	.9202	.9194	.9186	.9177	.9168	.9159	.9149	.9139
.0006	.9155	.9148	.9139	.9131	.9122	.9113	.9104	.9094	.9084	.9074	.9063
.0007	.9093	.9084	.9075	.9066	.9057	.9048	.9038	.9027	.9017	.9006	.8994
.0008	.9035	.9026	.9017	.9007	.8997	.8987	.8976	.8965	.8954	.8942	.8930
.0009	.8981	.8971	.8962	.8952	.8941	.8931	.8920	.8908	.8896	.8884	.8871
.0010	.8930	.8920	.8910	.8900	.8889	.8878	.8866	.8854	.8842	.8829	.8815
.0020	.8539	.8525	.8512	.8498	.8484	.8469	.8453	.8437	.8421	.8404	.8386
.0030	.8256	.8241	.8225	.8209	.8192	.8174	.8156	.8138	.8118	.8099	.8078
.0040	.8029	.8012	.7994	.7976	.7957	.7938	.7918	.7897	.7876	.7854	.7831
.0050	.7837	.7818	.7799	.7780	.7760	.7739	.7717	.7695	.7672	.7648	.7623
.0060	.7670	.7650	.7630	.7609	.7587	.7565	.7542	.7518	.7494	.7469	.7442
.0070	.7521	.7500	.7479	.7457	.7434	.7411	.7387	.7362	.7336	.7310	.7282
.0080	.7386	.7364	.7342	.7319	.7296	.7272	.7247	.7220	.7194	.7166	.7137
.0090	.7263	.7240	.7218	.7194	.7170	.7144	.7119	.7091	.7064	.7035	.7005
.0100	.7150	.7126	.7103	.7078	.7053	.7027	.7001	.6973	.6944	.6915	.6884
.0200	.6330	.6302	.6274	.6245	.6215	.6184	.6152	.6119	.6085	.6051	.6014
.0300	.5799	.5768	.5738	.5707	.5674	.5641	.5607	.5571	.5534	.5497	.5458
.0400	.5405	.5374	.5342	.5309	.5275	.5240	.5204	.5167	.5129	.5090	.5049
.0500	.5094	.5061	.5028	.4994	.4960	.4924	.4887	.4849	.4810	.4771	.4729
.0600	.4837	.4804	.4770	.4736	.4700	.4664	.4627	.4588	.4549	.4509	.4466
.0700	.4619	.4586	.4552	.4517	.4481	.4445	.4407	.4368	.4328	.4288	.4245
.0800	.4431	.4397	.4363	.4328	.4292	.4255	.4217	.4178	.4138	.4097	.4055
.0900	.4266	.4232	.4198	.4162	.4126	.4089	.4051	.4012	.3972	.3931	.3888
.1000	.4119	.4085	.4051	.4015	.3979	.3942	.3904	.3865	.3825	.3784	.3741

TABLE 52. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9561	.9558	.9555	.9552	.9550	.9548	.9545	.9541	.9537	.9535	.9533	.9529
.0002	.9388	.9383	.9379	.9375	.9372	.9370	.9365	.9360	.9354	.9351	.9349	.9343
.0003	.9257	.9252	.9247	.9242	.9238	.9236	.9230	.9224	.9217	.9213	.9211	.9204
.0004	.9150	.9144	.9138	.9132	.9128	.9125	.9119	.9112	.9104	.9100	.9096	.9088
.0005	.9056	.9050	.9043	.9037	.9032	.9029	.9022	.9014	.9006	.9001	.8998	.8989
.0006	.8973	.8966	.8959	.8952	.8947	.8944	.8936	.8927	.8919	.8913	.8909	.8900
.0007	.8897	.8890	.8882	.8875	.8870	.8866	.8858	.8849	.8839	.8833	.8829	.8819
.0008	.8828	.8820	.8812	.8804	.8799	.8795	.8786	.8776	.8766	.8760	.8756	.8745
.0009	.8763	.8755	.8747	.8738	.8732	.8728	.8719	.8709	.8699	.8692	.8688	.8676
.0010	.8703	.8694	.8685	.8676	.8671	.8666	.8656	.8646	.8635	.8628	.8624	.8612
.0020	.8236	.8224	.8213	.8201	.8193	.8188	.8175	.8161	.8147	.8138	.8132	.8116
.0030	.7902	.7889	.7875	.7861	.7853	.7846	.7831	.7815	.7799	.7788	.7781	.7763
.0040	.7635	.7621	.7606	.7590	.7581	.7574	.7557	.7540	.7521	.7510	.7502	.7483
.0050	.7411	.7395	.7380	.7363	.7353	.7345	.7327	.7308	.7289	.7277	.7268	.7247
.0060	.7216	.7200	.7183	.7166	.7155	.7147	.7128	.7108	.7087	.7074	.7066	.7043
.0070	.7044	.7027	.7009	.6991	.6980	.6971	.6952	.6931	.6909	.6896	.6886	.6863
.0080	.6889	.6871	.6853	.6834	.6822	.6814	.6793	.6771	.6749	.6735	.6725	.6701
.0090	.6748	.6730	.6711	.6691	.6679	.6670	.6649	.6627	.6603	.6589	.6579	.6554
.0100	.6618	.6599	.6580	.6560	.6548	.6538	.6517	.6494	.6470	.6455	.6445	.6419
.0200	.5695	.5673	.5651	.5627	.5613	.5602	.5577	.5551	.5523	.5506	.5495	.5465
.0300	.5111	.5087	.5064	.5039	.5024	.5012	.4986	.4958	.4929	.4911	.4898	.4867
.0400	.4685	.4661	.4637	.4611	.4596	.4584	.4557	.4528	.4498	.4480	.4467	.4435
.0500	.4353	.4329	.4305	.4278	.4263	.4251	.4223	.4194	.4164	.4146	.4133	.4101
.0600	.4083	.4059	.4034	.4008	.3992	.3980	.3953	.3923	.3893	.3875	.3862	.3829
.0700	.3857	.3832	.3808	.3781	.3766	.3754	.3726	.3697	.3667	.3648	.3636	.3603
.0800	.3663	.3639	.3614	.3588	.3572	.3561	.3533	.3504	.3474	.3455	.3443	.3410
.0900	.3494	.3470	.3446	.3419	.3404	.3392	.3365	.3336	.3306	.3288	.3275	.3243
.1000	.3345	.3322	.3297	.3271	.3256	.3244	.3217	.3188	.3159	.3141	.3128	.3096

TABLE 52. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9525	.9520	.9515	.9510	.9505	.9500	.9495	.9489	.9483	.9478	.9471
.0002	.9337	.9331	.9324	.9317	.9311	.9303	.9296	.9288	.9280	.9272	.9263
.0003	.9196	.9189	.9181	.9173	.9165	.9156	.9147	.9138	.9128	.9119	.9108
.0004	.9080	.9072	.9063	.9054	.9044	.9035	.9025	.9014	.9003	.8992	.8980
.0005	.8980	.8970	.8960	.8950	.8940	.8929	.8918	.8907	.8895	.8882	.8869
.0006	.8890	.8880	.8869	.8858	.8847	.8836	.8824	.8811	.8798	.8785	.8771
.0007	.8809	.8798	.8787	.8775	.8763	.8751	.8738	.8724	.8711	.8697	.8682
.0008	.8734	.8723	.8711	.8698	.8686	.8673	.8659	.8645	.8630	.8615	.8600
.0009	.8665	.8653	.8640	.8627	.8614	.8600	.8586	.8571	.8556	.8540	.8524
.0010	.8600	.8587	.8574	.8561	.8547	.8532	.8518	.8502	.8486	.8470	.8453
.0020	.8101	.8084	.8067	.8049	.8031	.8012	.7993	.7973	.7952	.7931	.7908
.0030	.7745	.7726	.7706	.7686	.7665	.7643	.7621	.7597	.7573	.7549	.7523
.0040	.7462	.7441	.7419	.7397	.7374	.7350	.7326	.7300	.7274	.7247	.7218
.0050	.7225	.7203	.7179	.7155	.7131	.7105	.7079	.7051	.7023	.6994	.6964
.0060	.7020	.6996	.6972	.6946	.6920	.6893	.6866	.6837	.6807	.6776	.6744
.0070	.6839	.6814	.6788	.6762	.6734	.6706	.6677	.6647	.6616	.6585	.6551
.0080	.6676	.6650	.6624	.6596	.6568	.6539	.6509	.6478	.6446	.6413	.6378
.0090	.6529	.6502	.6474	.6446	.6417	.6387	.6356	.6324	.6291	.6257	.6222
.0100	.6393	.6365	.6337	.6308	.6278	.6248	.6216	.6183	.6149	.6115	.6078
.0200	.5435	.5403	.5371	.5338	.5303	.5268	.5233	.5195	.5157	.5118	.5076
.0300	.4835	.4802	.4768	.4733	.4697	.4661	.4623	.4584	.4544	.4503	.4460
.0400	.4403	.4369	.4334	.4299	.4262	.4225	.4186	.4146	.4106	.4064	.4021
.0500	.4068	.4033	.3999	.3963	.3926	.3888	.3850	.3810	.3769	.3728	.3684
.0600	.3797	.3762	.3727	.3691	.3655	.3617	.3579	.3539	.3498	.3457	.3414
.0700	.3571	.3536	.3502	.3466	.3429	.3392	.3354	.3314	.3274	.3233	.3190
.0800	.3378	.3344	.3309	.3274	.3238	.3201	.3163	.3124	.3084	.3043	.3001
.0900	.3211	.3177	.3143	.3108	.3072	.3035	.2998	.2959	.2920	.2880	.2838
.1000	.3064	.3031	.2997	.2962	.2927	.2890	.2854	.2815	.2776	.2737	.2696

TABLE 53. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9349	.9345	.9340	.9335	.9332	.9330	.9325	.9320	.9314	.9310	.9308	.9302
.0002	.9096	.9090	.9083	.9077	.9073	.9070	.9063	.9055	.9047	.9042	.9039	.9031
.0003	.8907	.8900	.8892	.8884	.8880	.8876	.8868	.8859	.8849	.8844	.8840	.8829
.0004	.8752	.8744	.8735	.8726	.8721	.8717	.8707	.8697	.8687	.8680	.8676	.8664
.0005	.8618	.8609	.8600	.8590	.8584	.8580	.8569	.8558	.8547	.8540	.8535	.8522
.0006	.8500	.8490	.8480	.8469	.8463	.8458	.8447	.8435	.8423	.8415	.8410	.8396
.0007	.8392	.8382	.8371	.8360	.8353	.8348	.8336	.8324	.8310	.8302	.8297	.8282
.0008	.8294	.8283	.8272	.8260	.8253	.8248	.8235	.8222	.8208	.8199	.8193	.8178
.0009	.8203	.8192	.8180	.8168	.8160	.8155	.8141	.8127	.8113	.8104	.8098	.8082
.0010	.8119	.8107	.8094	.8081	.8074	.8068	.8054	.8039	.8024	.8015	.8008	.7992
.0020	.7474	.7459	.7443	.7426	.7417	.7409	.7391	.7373	.7353	.7341	.7333	.7312
.0030	.7024	.7006	.6989	.6970	.6959	.6950	.6930	.6909	.6887	.6873	.6864	.6840
.0040	.6671	.6652	.6633	.6613	.6601	.6591	.6570	.6547	.6523	.6508	.6498	.6473
.0050	.6380	.6360	.6339	.6318	.6305	.6295	.6272	.6248	.6223	.6207	.6197	.6169
.0060	.6130	.6109	.6088	.6066	.6052	.6042	.6018	.5993	.5967	.5950	.5939	.5911
.0070	.5912	.5890	.5868	.5845	.5831	.5821	.5796	.5770	.5743	.5726	.5715	.5685
.0080	.5718	.5696	.5673	.5649	.5635	.5624	.5599	.5572	.5544	.5527	.5515	.5486
.0090	.5543	.5521	.5497	.5473	.5458	.5448	.5422	.5394	.5366	.5348	.5337	.5306
.0100	.5384	.5361	.5338	.5313	.5298	.5287	.5261	.5233	.5204	.5186	.5174	.5143
.0200	.4298	.4273	.4248	.4221	.4205	.4193	.4165	.4135	.4105	.4086	.4073	.4040
.0300	.3653	.3629	.3603	.3577	.3561	.3549	.3520	.3491	.3460	.3441	.3428	.3396
.0400	.3207	.3183	.3158	.3131	.3116	.3104	.3076	.3047	.3017	.2999	.2986	.2954
.0500	.2872	.2848	.2824	.2798	.2783	.2772	.2745	.2716	.2687	.2669	.2657	.2626
.0600	.2609	.2586	.2562	.2537	.2522	.2511	.2485	.2458	.2429	.2412	.2400	.2370
.0700	.2395	.2372	.2350	.2325	.2311	.2300	.2275	.2248	.2220	.2204	.2192	.2163
.0800	.2217	.2195	.2173	.2149	.2135	.2125	.2100	.2074	.2047	.2031	.2020	.1992
.0900	.2065	.2044	.2022	.2000	.1986	.1976	.1952	.1927	.1901	.1885	.1874	.1847
.1000	.1935	.1914	.1893	.1871	.1858	.1848	.1825	.1800	.1775	.1760	.1750	.1723

TABLE 53. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9295	.9289	.9282	.9275	.9267	.9260	.9252	.9244	.9235	.9227	.9217
.0002	.9022	.9013	.9003	.8994	.8984	.8973	.8963	.8952	.8940	.8928	.8916
.0003	.8819	.8808	.8797	.8786	.8774	.8761	.8749	.8735	.8722	.8708	.8693
.0004	.8653	.8640	.8628	.8615	.8601	.8587	.8573	.8558	.8543	.8527	.8510
.0005	.8509	.8496	.8482	.8468	.8453	.8438	.8422	.8406	.8389	.8371	.8353
.0006	.8382	.8368	.8353	.8338	.8322	.8305	.8288	.8271	.8253	.8234	.8214
.0007	.8268	.8252	.8236	.8220	.8203	.8186	.8168	.8149	.8130	.8110	.8089
.0008	.8163	.8146	.8130	.8113	.8095	.8077	.8058	.8038	.8018	.7997	.7975
.0009	.8066	.8049	.8031	.8013	.7995	.7976	.7956	.7935	.7914	.7892	.7869
.0010	.7975	.7957	.7939	.7921	.7901	.7882	.7861	.7840	.7818	.7795	.7771
.0020	.7291	.7268	.7245	.7222	.7197	.7172	.7146	.7119	.7091	.7063	.7032
.0030	.6816	.6791	.6765	.6738	.6710	.6682	.6653	.6622	.6591	.6559	.6525
.0040	.6446	.6419	.6391	.6362	.6332	.6301	.6270	.6237	.6203	.6169	.6132
.0050	.6142	.6113	.6083	.6053	.6021	.5989	.5956	.5921	.5886	.5849	.5811
.0060	.5882	.5852	.5821	.5789	.5757	.5723	.5689	.5653	.5616	.5578	.5539
.0070	.5656	.5625	.5593	.5560	.5527	.5492	.5457	.5420	.5382	.5343	.5302
.0080	.5455	.5423	.5391	.5357	.5323	.5287	.5251	.5213	.5175	.5135	.5094
.0090	.5275	.5242	.5209	.5175	.5140	.5104	.5067	.5029	.4990	.4950	.4907
.0100	.5112	.5078	.5045	.5010	.4975	.4938	.4901	.4862	.4822	.4782	.4739
.0200	.4007	.3971	.3936	.3900	.3862	.3824	.3785	.3744	.3703	.3661	.3617
.0300	.3362	.3328	.3293	.3256	.3219	.3182	.3143	.3103	.3063	.3022	.2979
.0400	.2921	.2887	.2853	.2818	.2782	.2746	.2709	.2670	.2631	.2591	.2550
.0500	.2594	.2561	.2528	.2494	.2460	.2425	.2389	.2352	.2314	.2276	.2236
.0600	.2339	.2307	.2276	.2243	.2209	.2175	.2141	.2105	.2069	.2033	.1995
.0700	.2134	.2103	.2072	.2040	.2008	.1975	.1942	.1908	.1873	.1838	.1802
.0800	.1963	.1933	.1904	.1873	.1842	.1811	.1779	.1746	.1712	.1679	.1644
.0900	.1820	.1791	.1762	.1733	.1703	.1672	.1641	.1610	.1578	.1545	.1512
.1000	.1696	.1669	.1641	.1612	.1583	.1554	.1524	.1494	.1463	.1432	.1399

TABLE 54. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9142	.9136	.9130	.9124	.9120	.9117	.9110	.9103	.9096	.9091	.9088	.9080
.0002	.8813	.8805	.8797	.8788	.8783	.8779	.8770	.8760	.8750	.8744	.8740	.8729
.0003	.8570	.8561	.8551	.8541	.8535	.8530	.8519	.8508	.8496	.8489	.8484	.8471
.0004	.8372	.8361	.8350	.8339	.8332	.8327	.8315	.8302	.8289	.8280	.8275	.8260
.0005	.8202	.8190	.8178	.8166	.8158	.8153	.8139	.8125	.8111	.8102	.8096	.8080
.0006	.8051	.8039	.8026	.8013	.8005	.7999	.7985	.7970	.7954	.7944	.7938	.7921
.0007	.7916	.7903	.7890	.7876	.7867	.7861	.7846	.7830	.7813	.7803	.7796	.7778
.0008	.7793	.7779	.7765	.7750	.7741	.7735	.7719	.7702	.7685	.7674	.7667	.7648
.0009	.7679	.7665	.7650	.7635	.7626	.7619	.7602	.7585	.7566	.7555	.7548	.7528
.0010	.7574	.7559	.7544	.7528	.7518	.7511	.7493	.7475	.7457	.7445	.7437	.7417
.0020	.6783	.6764	.6745	.6725	.6713	.6704	.6683	.6661	.6637	.6623	.6613	.6588
.0030	.6243	.6223	.6202	.6180	.6166	.6156	.6133	.6108	.6082	.6066	.6055	.6027
.0040	.5829	.5807	.5785	.5761	.5747	.5736	.5711	.5685	.5657	.5640	.5629	.5599
.0050	.5492	.5469	.5446	.5421	.5406	.5395	.5369	.5341	.5313	.5295	.5283	.5252
.0060	.5208	.5184	.5160	.5134	.5119	.5108	.5081	.5052	.5023	.5005	.4992	.4961
.0070	.4962	.4938	.4913	.4887	.4872	.4860	.4832	.4803	.4773	.4755	.4742	.4710
.0080	.4746	.4721	.4696	.4670	.4654	.4643	.4615	.4585	.4555	.4536	.4523	.4490
.0090	.4553	.4529	.4503	.4477	.4461	.4449	.4421	.4391	.4360	.4341	.4329	.4296
.0100	.4380	.4355	.4330	.4303	.4287	.4275	.4247	.4217	.4186	.4167	.4154	.4121
.0200	.3243	.3218	.3193	.3166	.3150	.3139	.3110	.3081	.3051	.3032	.3019	.2986
.0300	.2612	.2588	.2564	.2539	.2524	.2513	.2486	.2458	.2429	.2411	.2400	.2369
.0400	.2195	.2173	.2150	.2126	.2112	.2102	.2077	.2050	.2024	.2007	.1996	.1967
.0500	.1895	.1874	.1853	.1830	.1817	.1807	.1784	.1759	.1734	.1719	.1708	.1681
.0600	.1667	.1647	.1627	.1606	.1594	.1584	.1562	.1539	.1516	.1501	.1491	.1466
.0700	.1487	.1469	.1450	.1430	.1418	.1409	.1389	.1367	.1345	.1331	.1322	.1298
.0800	.1342	.1324	.1306	.1287	.1276	.1268	.1248	.1228	.1207	.1194	.1185	.1163
.0900	.1221	.1204	.1187	.1169	.1159	.1151	.1132	.1113	.1093	.1081	.1073	.1052
.1000	.1119	.1103	.1087	.1070	.1060	.1053	.1035	.1017	.0998	.0986	.0979	.0959

TABLE 54. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9072	.9063	.9054	.9045	.9035	.9025	.9015	.9005	.8994	.8982	.8970
.0002	.8718	.8706	.8694	.8681	.8669	.8655	.8642	.8627	.8612	.8597	.8581
.0003	.8457	.8443	.8429	.8414	.8399	.8384	.8367	.8350	.8333	.8315	.8296
.0004	.8245	.8229	.8214	.8197	.8180	.8162	.8144	.8125	.8106	.8086	.8064
.0005	.8064	.8046	.8029	.8011	.7992	.7973	.7953	.7933	.7912	.7890	.7867
.0006	.7903	.7885	.7867	.7847	.7827	.7807	.7786	.7764	.7741	.7717	.7693
.0007	.7760	.7740	.7721	.7700	.7679	.7657	.7635	.7612	.7588	.7563	.7537
.0008	.7629	.7608	.7588	.7566	.7544	.7521	.7498	.7474	.7448	.7423	.7395
.0009	.7508	.7487	.7465	.7443	.7420	.7396	.7372	.7347	.7320	.7294	.7265
.0010	.7396	.7374	.7352	.7329	.7305	.7280	.7255	.7229	.7202	.7174	.7145
.0020	.6562	.6535	.6508	.6479	.6450	.6420	.6389	.6357	.6323	.6289	.6254
.0030	.5999	.5969	.5938	.5907	.5875	.5842	.5808	.5772	.5736	.5698	.5659
.0040	.5569	.5537	.5505	.5472	.5437	.5402	.5366	.5329	.5290	.5251	.5210
.0050	.5221	.5188	.5154	.5120	.5084	.5048	.5011	.4972	.4932	.4892	.4849
.0060	.4929	.4895	.4860	.4825	.4789	.4752	.4714	.4674	.4633	.4592	.4549
.0070	.4677	.4643	.4608	.4572	.4535	.4498	.4459	.4419	.4377	.4336	.4292
.0080	.4457	.4422	.4387	.4351	.4314	.4276	.4237	.4196	.4155	.4112	.4068
.0090	.4262	.4227	.4192	.4155	.4118	.4079	.4040	.3999	.3957	.3915	.3871
.0100	.4087	.4052	.4016	.3980	.3942	.3903	.3864	.3823	.3781	.3739	.3695
.0200	.2954	.2919	.2885	.2849	.2813	.2776	.2738	.2699	.2659	.2619	.2577
.0300	.2338	.2306	.2274	.2240	.2207	.2172	.2137	.2101	.2065	.2028	.1989
.0400	.1939	.1908	.1879	.1848	.1816	.1785	.1752	.1719	.1686	.1652	.1617
.0500	.1655	.1627	.1599	.1570	.1541	.1512	.1482	.1451	.1421	.1390	.1357
.0600	.1441	.1415	.1389	.1363	.1336	.1308	.1281	.1252	.1224	.1195	.1165
.0700	.1275	.1250	.1226	.1201	.1176	.1150	.1125	.1098	.1072	.1045	.1018
.0800	.1141	.1118	.1095	.1072	.1048	.1024	.1000	.0976	.0951	.0926	.0901
.0900	.1031	.1009	.0988	.0966	.0944	.0921	.0899	.0876	.0852	.0829	.0805
.1000	.0939	.0919	.0898	.0878	.0857	.0835	.0814	.0793	.0771	.0749	.0727

TABLE 55. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9040	.9033	.9027	.9020	.9016	.9012	.9005	.8997	.8989	.8984	.8980	.8971
.0002	.8675	.8666	.8657	.8648	.8642	.8638	.8627	.8617	.8606	.8599	.8594	.8582
.0003	.8406	.8396	.8385	.8374	.8368	.8363	.8350	.8338	.8325	.8317	.8311	.8297
.0004	.8188	.8176	.8164	.8152	.8144	.8139	.8125	.8111	.8096	.8087	.8081	.8065
.0005	.8001	.7988	.7975	.7962	.7953	.7947	.7933	.7917	.7901	.7891	.7885	.7867
.0006	.7836	.7823	.7809	.7794	.7786	.7779	.7763	.7747	.7730	.7719	.7712	.7693
.0007	.7688	.7674	.7660	.7644	.7635	.7628	.7611	.7594	.7576	.7565	.7557	.7537
.0008	.7554	.7539	.7524	.7507	.7498	.7490	.7473	.7455	.7436	.7424	.7416	.7396
.0009	.7430	.7414	.7398	.7382	.7371	.7364	.7346	.7327	.7307	.7295	.7287	.7265
.0010	.7315	.7299	.7282	.7265	.7254	.7247	.7228	.7208	.7188	.7175	.7167	.7145
.0020	.6461	.6442	.6421	.6400	.6387	.6378	.6355	.6331	.6306	.6290	.6280	.6253
.0030	.5886	.5865	.5842	.5819	.5805	.5794	.5769	.5743	.5715	.5698	.5687	.5657
.0040	.5449	.5426	.5402	.5377	.5363	.5351	.5325	.5297	.5268	.5251	.5238	.5207
.0050	.5096	.5072	.5047	.5022	.5006	.4995	.4967	.4939	.4909	.4890	.4878	.4846
.0060	.4800	.4775	.4750	.4724	.4708	.4696	.4668	.4639	.4609	.4590	.4577	.4544
.0070	.4546	.4521	.4495	.4469	.4453	.4441	.4413	.4383	.4352	.4333	.4320	.4287
.0080	.4324	.4299	.4273	.4246	.4230	.4218	.4189	.4159	.4128	.4109	.4096	.4063
.0090	.4127	.4102	.4076	.4049	.4033	.4021	.3992	.3962	.3931	.3911	.3898	.3865
.0100	.3951	.3926	.3900	.3873	.3856	.3844	.3815	.3785	.3754	.3735	.3722	.3688
.0200	.2817	.2793	.2768	.2742	.2727	.2715	.2688	.2659	.2630	.2612	.2599	.2568
.0300	.2208	.2186	.2163	.2139	.2125	.2114	.2089	.2062	.2035	.2019	.2007	.1979
.0400	.1816	.1795	.1774	.1752	.1739	.1729	.1706	.1682	.1657	.1642	.1632	.1605
.0500	.1539	.1520	.1501	.1480	.1468	.1459	.1438	.1416	.1393	.1379	.1370	.1346
.0600	.1333	.1315	.1297	.1278	.1267	.1259	.1239	.1218	.1197	.1184	.1176	.1154
.0700	.1172	.1156	.1139	.1121	.1111	.1103	.1085	.1066	.1046	.1034	.1026	.1006
.0800	.1044	.1028	.1013	.0996	.0987	.0979	.0962	.0945	.0926	.0915	.0908	.0889
.0900	.0939	.0924	.0910	.0894	.0885	.0878	.0862	.0846	.0829	.0819	.0812	.0794
.1000	.0851	.0838	.0824	.0809	.0801	.0794	.0779	.0764	.0748	.0738	.0732	.0715

TABLE 55. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8962	.8952	.8942	.8932	.8921	.8910	.8899	.8887	.8875	.8863	.8849
.0002	.8569	.8556	.8543	.8529	.8515	.8500	.8485	.8469	.8453	.8436	.8419
.0003	.8282	.8267	.8251	.8235	.8218	.8201	.8183	.8164	.8145	.8125	.8105
.0004	.8049	.8031	.8014	.7996	.7977	.7958	.7938	.7917	.7896	.7874	.7850
.0005	.7849	.7831	.7812	.7792	.7772	.7751	.7729	.7706	.7683	.7659	.7634
.0006	.7674	.7654	.7634	.7613	.7591	.7569	.7546	.7522	.7497	.7472	.7445
.0007	.7517	.7496	.7475	.7453	.7430	.7406	.7382	.7356	.7330	.7304	.7275
.0008	.7375	.7353	.7330	.7307	.7283	.7258	.7233	.7206	.7179	.7151	.7122
.0009	.7244	.7221	.7197	.7173	.7148	.7123	.7096	.7069	.7040	.7011	.6981
.0010	.7122	.7098	.7074	.7049	.7024	.6997	.6970	.6941	.6912	.6882	.6851
.0020	.6225	.6197	.6167	.6137	.6106	.6074	.6041	.6007	.5971	.5935	.5897
.0030	.5627	.5596	.5564	.5531	.5497	.5462	.5426	.5389	.5351	.5312	.5271
.0040	.5176	.5143	.5109	.5074	.5039	.5002	.4965	.4926	.4886	.4845	.4802
.0050	.4813	.4779	.4745	.4709	.4672	.4635	.4596	.4556	.4515	.4474	.4430
.0060	.4511	.4476	.4441	.4405	.4368	.4330	.4291	.4250	.4209	.4166	.4122
.0070	.4253	.4218	.4183	.4146	.4108	.4070	.4031	.3990	.3948	.3906	.3861
.0080	.4029	.3994	.3958	.3921	.3883	.3845	.3805	.3764	.3723	.3680	.3636
.0090	.3831	.3796	.3760	.3723	.3685	.3647	.3607	.3566	.3524	.3482	.3438
.0100	.3655	.3619	.3583	.3547	.3509	.3470	.3431	.3390	.3349	.3306	.3262
.0200	.2536	.2503	.2469	.2435	.2400	.2365	.2329	.2291	.2253	.2215	.2175
.0300	.1950	.1919	.1889	.1858	.1827	.1795	.1762	.1729	.1695	.1661	.1626
.0400	.1579	.1552	.1524	.1496	.1468	.1439	.1410	.1380	.1349	.1319	.1287
.0500	.1321	.1296	.1271	.1246	.1220	.1194	.1167	.1140	.1113	.1086	.1057
.0600	.1131	.1108	.1086	.1062	.1038	.1015	.0991	.0966	.0941	.0916	.0891
.0700	.0985	.0964	.0943	.0922	.0900	.0878	.0856	.0833	.0811	.0788	.0765
.0800	.0870	.0850	.0831	.0811	.0791	.0770	.0750	.0729	.0709	.0688	.0667
.0900	.0776	.0758	.0740	.0721	.0703	.0684	.0665	.0646	.0627	.0608	.0588
.1000	.0699	.0682	.0665	.0647	.0630	.0613	.0595	.0577	.0559	.0542	.0524

TABLE 56. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8741	.8733	.8724	.8715	.8709	.8705	.8696	.8685	.8675	.8668	.8664	.8652
.0002	.8273	.8262	.8251	.8239	.8231	.8226	.8213	.8200	.8185	.8177	.8171	.8155
.0003	.7934	.7921	.7907	.7893	.7885	.7879	.7863	.7848	.7831	.7821	.7814	.7796
.0004	.7660	.7645	.7631	.7615	.7606	.7599	.7582	.7564	.7546	.7535	.7527	.7507
.0005	.7428	.7412	.7396	.7379	.7369	.7361	.7343	.7324	.7305	.7292	.7284	.7263
.0006	.7225	.7208	.7191	.7173	.7162	.7154	.7135	.7115	.7094	.7081	.7072	.7049
.0007	.7043	.7026	.7008	.6989	.6978	.6970	.6949	.6928	.6906	.6893	.6883	.6860
.0008	.6879	.6861	.6843	.6823	.6811	.6803	.6782	.6760	.6737	.6723	.6713	.6688
.0009	.6729	.6711	.6691	.6671	.6659	.6650	.6628	.6605	.6582	.6567	.6557	.6531
.0010	.6591	.6572	.6552	.6531	.6518	.6509	.6487	.6463	.6439	.6424	.6414	.6387
.0020	.5586	.5563	.5540	.5515	.5500	.5490	.5463	.5436	.5407	.5390	.5378	.5347
.0030	.4933	.4909	.4884	.4858	.4842	.4830	.4803	.4773	.4743	.4724	.4712	.4679
.0040	.4451	.4426	.4400	.4373	.4357	.4345	.4316	.4286	.4255	.4236	.4223	.4189
.0050	.4070	.4045	.4019	.3991	.3975	.3963	.3934	.3904	.3872	.3853	.3840	.3806
.0060	.3758	.3732	.3706	.3679	.3663	.3651	.3622	.3591	.3560	.3541	.3527	.3494
.0070	.3495	.3470	.3444	.3417	.3400	.3388	.3359	.3329	.3298	.3279	.3266	.3232
.0080	.3269	.3244	.3218	.3191	.3175	.3163	.3135	.3105	.3074	.3055	.3042	.3009
.0090	.3073	.3048	.3022	.2995	.2979	.2968	.2939	.2910	.2879	.2861	.2848	.2815
.0100	.2899	.2874	.2849	.2823	.2807	.2795	.2767	.2738	.2708	.2690	.2677	.2645
.0200	.1847	.1826	.1804	.1782	.1768	.1758	.1735	.1710	.1685	.1669	.1659	.1632
.0300	.1335	.1317	.1298	.1279	.1268	.1259	.1239	.1219	.1197	.1184	.1175	.1153
.0400	.1028	.1013	.0997	.0981	.0971	.0963	.0946	.0928	.0910	.0899	.0892	.0873
.0500	.0825	.0811	.0798	.0783	.0775	.0768	.0753	.0738	.0722	.0712	.0706	.0689
.0600	.0681	.0669	.0656	.0644	.0636	.0631	.0618	.0604	.0590	.0582	.0576	.0562
.0700	.0574	.0563	.0552	.0541	.0534	.0529	.0517	.0505	.0493	.0486	.0481	.0468
.0800	.0491	.0482	.0472	.0462	.0456	.0451	.0441	.0430	.0419	.0413	.0408	.0397
.0900	.0427	.0418	.0409	.0400	.0394	.0390	.0381	.0371	.0361	.0355	.0351	.0341
.1000	.0374	.0366	.0358	.0350	.0345	.0342	.0333	.0324	.0315	.0310	.0306	.0297

TABLE 56. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8640	.8628	.8615	.8602	.8588	.8574	.8560	.8545	.8529	.8513	.8496
.0002	.8140	.8123	.8106	.8089	.8071	.8052	.8033	.8013	.7993	.7971	.7949
.0003	.7778	.7758	.7739	.7719	.7698	.7676	.7654	.7631	.7607	.7582	.7556
.0004	.7487	.7466	.7444	.7421	.7398	.7374	.7350	.7324	.7298	.7270	.7242
.0005	.7241	.7218	.7194	.7170	.7145	.7120	.7093	.7065	.7037	.7008	.6977
.0006	.7026	.7002	.6977	.6951	.6925	.6898	.6870	.6841	.6810	.6780	.6747
.0007	.6835	.6810	.6784	.6757	.6729	.6701	.6671	.6641	.6609	.6577	.6543
.0008	.6663	.6636	.6609	.6581	.6553	.6523	.6493	.6461	.6428	.6395	.6360
.0009	.6505	.6478	.6450	.6421	.6392	.6361	.6330	.6297	.6263	.6229	.6193
.0010	.6360	.6332	.6303	.6274	.6243	.6212	.6180	.6146	.6112	.6076	.6039
.0020	.5316	.5283	.5250	.5215	.5180	.5144	.5107	.5068	.5028	.4988	.4946
.0030	.4646	.4611	.4576	.4540	.4503	.4465	.4426	.4385	.4344	.4302	.4257
.0040	.4156	.4120	.4084	.4047	.4010	.3971	.3931	.3890	.3848	.3805	.3761
.0050	.3772	.3736	.3700	.3663	.3625	.3587	.3547	.3506	.3464	.3421	.3377
.0060	.3460	.3424	.3389	.3352	.3314	.3275	.3236	.3195	.3154	.3112	.3068
.0070	.3199	.3164	.3128	.3092	.3054	.3016	.2977	.2937	.2896	.2855	.2812
.0080	.2976	.2941	.2906	.2870	.2833	.2796	.2758	.2718	.2678	.2637	.2595
.0090	.2783	.2748	.2714	.2678	.2642	.2605	.2568	.2529	.2490	.2450	.2408
.0100	.2613	.2579	.2545	.2510	.2475	.2439	.2402	.2364	.2325	.2286	.2246
.0200	.1605	.1577	.1549	.1521	.1492	.1462	.1433	.1402	.1371	.1340	.1308
.0300	.1131	.1107	.1084	.1060	.1037	.1012	.0988	.0963	.0938	.0913	.0887
.0400	.0854	.0834	.0814	.0794	.0774	.0754	.0734	.0713	.0692	.0671	.0650
.0500	.0673	.0656	.0639	.0622	.0605	.0588	.0571	.0553	.0535	.0518	.0500
.0600	.0547	.0532	.0518	.0503	.0488	.0473	.0458	.0443	.0428	.0413	.0398
.0700	.0455	.0442	.0429	.0416	.0403	.0390	.0377	.0364	.0351	.0338	.0325
.0800	.0385	.0374	.0362	.0351	.0339	.0328	.0316	.0305	.0293	.0282	.0270
.0900	.0331	.0321	.0310	.0300	.0290	.0280	.0269	.0259	.0249	.0239	.0229
.1000	.0288	.0278	.0269	.0260	.0251	.0241	.0232	.0223	.0214	.0205	.0196

TABLE 57. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8357	.8347	.8336	.8324	.8317	.8312	.8300	.8287	.8273	.8265	.8259	.8244
.0002	.7767	.7753	.7738	.7723	.7714	.7708	.7691	.7675	.7657	.7646	.7638	.7619
.0003	.7345	.7329	.7312	.7295	.7284	.7277	.7258	.7239	.7218	.7206	.7197	.7175
.0004	.7009	.6991	.6973	.6954	.6942	.6934	.6914	.6892	.6870	.6856	.6847	.6823
.0005	.6727	.6708	.6689	.6668	.6656	.6647	.6625	.6602	.6579	.6564	.6554	.6528
.0006	.6483	.6463	.6442	.6421	.6408	.6399	.6376	.6352	.6327	.6311	.6301	.6274
.0007	.6267	.6246	.6225	.6203	.6189	.6179	.6156	.6131	.6105	.6089	.6078	.6050
.0008	.6073	.6052	.6030	.6007	.5993	.5983	.5958	.5932	.5906	.5889	.5878	.5849
.0009	.5897	.5875	.5853	.5829	.5815	.5804	.5779	.5753	.5725	.5708	.5697	.5667
.0010	.5736	.5714	.5691	.5666	.5652	.5641	.5615	.5588	.5560	.5543	.5531	.5501
.0020	.4600	.4575	.4550	.4523	.4507	.4495	.4466	.4436	.4405	.4386	.4373	.4340
.0030	.3898	.3872	.3846	.3819	.3802	.3790	.3761	.3731	.3699	.3679	.3666	.3633
.0040	.3398	.3373	.3347	.3319	.3303	.3291	.3262	.3232	.3200	.3181	.3168	.3135
.0050	.3016	.2991	.2966	.2939	.2923	.2911	.2882	.2853	.2822	.2804	.2791	.2758
.0060	.2712	.2687	.2662	.2636	.2621	.2609	.2581	.2553	.2523	.2505	.2492	.2461
.0070	.2462	.2438	.2414	.2388	.2373	.2362	.2335	.2307	.2279	.2261	.2249	.2218
.0080	.2252	.2229	.2206	.2181	.2166	.2155	.2129	.2102	.2075	.2057	.2046	.2016
.0090	.2073	.2051	.2028	.2004	.1990	.1979	.1954	.1928	.1901	.1885	.1874	.1845
.0100	.1919	.1897	.1875	.1852	.1838	.1828	.1803	.1778	.1752	.1736	.1725	.1698
.0200	.1052	.1036	.1020	.1003	.0993	.0985	.0967	.0949	.0931	.0919	.0911	.0892
.0300	.0682	.0670	.0657	.0645	.0637	.0631	.0618	.0604	.0590	.0582	.0576	.0561
.0400	.0482	.0472	.0462	.0452	.0446	.0442	.0431	.0420	.0409	.0403	.0398	.0387
.0500	.0359	.0351	.0343	.0335	.0330	.0327	.0318	.0309	.0301	.0295	.0292	.0283
.0600	.0278	.0271	.0265	.0258	.0254	.0251	.0244	.0237	.0230	.0225	.0222	.0215
.0700	.0221	.0216	.0210	.0204	.0201	.0199	.0193	.0187	.0181	.0177	.0175	.0169
.0800	.0180	.0175	.0171	.0166	.0163	.0161	.0156	.0151	.0146	.0143	.0140	.0135
.0900	.0149	.0145	.0141	.0137	.0134	.0132	.0128	.0124	.0119	.0117	.0115	.0111
.1000	.0125	.0122	.0118	.0115	.0112	.0111	.0107	.0103	.0100	.0097	.0096	.0092

TABLE 57. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Güntelberg*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8229	.8214	.8198	.8181	.8164	.8146	.8127	.8108	.8088	.8068	.8047
.0002	.7600	.7579	.7558	.7537	.7514	.7491	.7468	.7443	.7417	.7391	.7364
.0003	.7153	.7129	.7105	.7080	.7055	.7028	.7001	.6973	.6944	.6914	.6882
.0004	.6798	.6772	.6746	.6719	.6691	.6662	.6633	.6602	.6570	.6538	.6503
.0005	.6502	.6474	.6447	.6418	.6388	.6357	.6326	.6293	.6259	.6225	.6188
.0006	.6246	.6218	.6188	.6158	.6127	.6095	.6062	.6027	.5992	.5956	.5918
.0007	.6021	.5991	.5961	.5929	.5897	.5864	.5829	.5794	.5757	.5720	.5681
.0008	.5819	.5789	.5757	.5725	.5691	.5657	.5622	.5585	.5548	.5509	.5469
.0009	.5637	.5605	.5573	.5540	.5506	.5471	.5435	.5397	.5359	.5320	.5278
.0010	.5470	.5438	.5405	.5371	.5336	.5300	.5264	.5225	.5186	.5146	.5105
.0020	.4306	.4271	.4235	.4198	.4160	.4121	.4082	.4041	.3999	.3956	.3911
.0030	.3598	.3563	.3526	.3489	.3451	.3412	.3373	.3332	.3290	.3247	.3203
.0040	.3101	.3066	.3030	.2994	.2957	.2919	.2880	.2840	.2799	.2758	.2714
.0050	.2726	.2691	.2657	.2621	.2585	.2548	.2511	.2472	.2433	.2393	.2351
.0060	.2429	.2396	.2362	.2328	.2293	.2258	.2222	.2185	.2147	.2109	.2069
.0070	.2188	.2156	.2123	.2090	.2057	.2023	.1988	.1952	.1916	.1880	.1842
.0080	.1987	.1956	.1925	.1893	.1861	.1828	.1795	.1761	.1726	.1691	.1655
.0090	.1817	.1787	.1757	.1726	.1695	.1664	.1632	.1599	.1566	.1533	.1498
.0100	.1670	.1642	.1613	.1584	.1554	.1524	.1493	.1462	.1430	.1398	.1365
.0200	.0872	.0852	.0832	.0812	.0791	.0770	.0750	.0728	.0707	.0686	.0664
.0300	.0547	.0532	.0517	.0502	.0487	.0472	.0457	.0441	.0426	.0411	.0396
.0400	.0376	.0364	.0353	.0341	.0330	.0319	.0307	.0296	.0284	.0273	.0261
.0500	.0274	.0265	.0256	.0247	.0238	.0229	.0220	.0211	.0202	.0193	.0184
.0600	.0208	.0200	.0193	.0186	.0178	.0171	.0164	.0157	.0150	.0143	.0136
.0700	.0163	.0156	.0150	.0144	.0138	.0132	.0127	.0121	.0115	.0109	.0104
.0800	.0130	.0125	.0120	.0115	.0110	.0105	.0100	.0095	.0090	.0086	.0081
.0900	.0106	.0102	.0098	.0093	.0089	.0085	.0081	.0077	.0073	.0069	.0065
.1000	.0088	.0084	.0081	.0077	.0073	.0070	.0066	.0063	.0059	.0056	.0053

TABLE 58. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*
(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9881	.9881	.9880
.0002	.9844	.9843	.9842	.9840	.9839	.9839	.9838	.9836	.9835	.9834	.9833	.9831
.0003	.9810	.9808	.9807	.9805	.9805	.9804	.9802	.9800	.9798	.9797	.9797	.9794
.0004	.9781	.9780	.9778	.9776	.9775	.9775	.9773	.9771	.9768	.9767	.9766	.9764
.0005	.9756	.9755	.9753	.9751	.9750	.9749	.9747	.9745	.9742	.9741	.9740	.9737
.0006	.9734	.9732	.9730	.9728	.9727	.9726	.9724	.9721	.9719	.9717	.9716	.9713
.0007	.9714	.9712	.9710	.9708	.9706	.9705	.9703	.9700	.9697	.9695	.9694	.9691
.0008	.9695	.9693	.9691	.9688	.9687	.9686	.9683	.9680	.9677	.9675	.9674	.9671
.0009	.9678	.9675	.9673	.9670	.9669	.9668	.9665	.9662	.9659	.9657	.9655	.9652
.0010	.9661	.9659	.9656	.9654	.9652	.9651	.9648	.9645	.9641	.9639	.9638	.9634
.0020	.9531	.9528	.9524	.9521	.9518	.9517	.9513	.9508	.9504	.9501	.9499	.9494
.0030	.9435	.9431	.9427	.9423	.9420	.9418	.9413	.9408	.9403	.9399	.9397	.9391
.0040	.9357	.9353	.9348	.9343	.9340	.9338	.9332	.9326	.9320	.9316	.9314	.9307
.0050	.9290	.9285	.9280	.9275	.9271	.9269	.9262	.9256	.9249	.9245	.9242	.9234
.0060	.9231	.9225	.9220	.9214	.9210	.9208	.9201	.9194	.9187	.9182	.9179	.9171
.0070	.9177	.9172	.9166	.9160	.9156	.9153	.9146	.9138	.9130	.9126	.9122	.9114
.0080	.9129	.9123	.9117	.9110	.9106	.9103	.9095	.9088	.9079	.9074	.9071	.9061
.0090	.9084	.9078	.9071	.9064	.9060	.9057	.9049	.9041	.9032	.9027	.9023	.9013
.0100	.9042	.9036	.9029	.9022	.9017	.9014	.9006	.8997	.8988	.8982	.8979	.8968
.0200	.8730	.8722	.8713	.8704	.8698	.8693	.8683	.8672	.8660	.8653	.8648	.8635
.0300	.8518	.8508	.8498	.8487	.8480	.8475	.8463	.8451	.8437	.8429	.8423	.8408
.0400	.8355	.8345	.8333	.8322	.8314	.8309	.8295	.8281	.8266	.8257	.8251	.8234
.0500	.8223	.8212	.8200	.8187	.8179	.8173	.8159	.8144	.8128	.8118	.8111	.8093
.0600	.8112	.8100	.8087	.8074	.8065	.8059	.8044	.8028	.8011	.8001	.7994	.7975
.0700	.8017	.8004	.7991	.7977	.7968	.7961	.7946	.7929	.7911	.7901	.7893	.7874
.0800	.7933	.7920	.7906	.7892	.7882	.7876	.7859	.7842	.7824	.7813	.7805	.7785
.0900	.7859	.7845	.7831	.7816	.7807	.7800	.7783	.7765	.7746	.7735	.7727	.7706
.1000	.7793	.7779	.7764	.7749	.7739	.7732	.7715	.7697	.7677	.7666	.7657	.7636

TABLE 58. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9878	.9877	.9876	.9874	.9873	.9871	.9870	.9868	.9866	.9864	.9862
.0002	.9829	.9828	.9826	.9824	.9822	.9819	.9817	.9815	.9812	.9810	.9807
.0003	.9792	.9790	.9788	.9785	.9783	.9780	.9777	.9774	.9771	.9768	.9765
.0004	.9761	.9759	.9756	.9753	.9750	.9747	.9744	.9741	.9737	.9734	.9730
.0005	.9734	.9731	.9728	.9725	.9722	.9719	.9715	.9711	.9708	.9704	.9699
.0006	.9710	.9707	.9703	.9700	.9697	.9693	.9689	.9685	.9681	.9677	.9672
.0007	.9688	.9684	.9681	.9677	.9673	.9669	.9665	.9661	.9657	.9652	.9647
.0008	.9667	.9664	.9660	.9656	.9652	.9648	.9643	.9639	.9634	.9629	.9624
.0009	.9648	.9644	.9640	.9636	.9632	.9628	.9623	.9618	.9613	.9608	.9602
.0010	.9630	.9626	.9622	.9618	.9613	.9609	.9604	.9599	.9593	.9588	.9582
.0020	.9489	.9483	.9478	.9472	.9466	.9459	.9452	.9445	.9438	.9431	.9423
.0030	.9385	.9378	.9371	.9364	.9357	.9349	.9341	.9333	.9324	.9315	.9306
.0040	.9300	.9292	.9284	.9276	.9268	.9259	.9250	.9241	.9231	.9221	.9210
.0050	.9227	.9218	.9210	.9201	.9192	.9182	.9173	.9162	.9151	.9140	.9129
.0060	.9162	.9153	.9144	.9135	.9125	.9115	.9104	.9093	.9081	.9069	.9057
.0070	.9105	.9095	.9085	.9075	.9065	.9054	.9042	.9030	.9018	.9006	.8992
.0080	.9052	.9042	.9032	.9021	.9010	.8998	.8986	.8974	.8961	.8947	.8933
.0090	.9003	.8993	.8982	.8971	.8959	.8947	.8934	.8921	.8908	.8894	.8879
.0100	.8958	.8947	.8936	.8924	.8912	.8900	.8886	.8873	.8858	.8844	.8828
.0200	.8621	.8607	.8592	.8577	.8562	.8545	.8528	.8510	.8492	.8473	.8453
.0300	.8392	.8376	.8359	.8342	.8324	.8305	.8286	.8265	.8244	.8223	.8199
.0400	.8217	.8199	.8181	.8162	.8142	.8122	.8100	.8078	.8055	.8031	.8006
.0500	.8075	.8056	.8037	.8016	.7995	.7973	.7950	.7926	.7902	.7877	.7850
.0600	.7956	.7936	.7915	.7894	.7872	.7848	.7824	.7799	.7773	.7747	.7719
.0700	.7854	.7833	.7811	.7789	.7766	.7741	.7716	.7690	.7663	.7636	.7606
.0800	.7764	.7743	.7720	.7697	.7673	.7648	.7622	.7595	.7567	.7539	.7508
.0900	.7685	.7663	.7640	.7616	.7591	.7565	.7539	.7511	.7482	.7453	.7421
.1000	.7614	.7591	.7568	.7543	.7518	.7491	.7464	.7435	.7406	.7376	.7344

TABLE 59. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*
(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9777	.9775	.9774	.9773	.9772	.9770	.9768	.9766	.9764	.9763	.9761
.0002	.9690	.9688	.9686	.9683	.9682	.9680	.9678	.9675	.9672	.9670	.9669	.9665
.0003	.9623	.9620	.9618	.9615	.9613	.9611	.9608	.9605	.9601	.9599	.9597	.9593
.0004	.9567	.9564	.9561	.9558	.9556	.9554	.9550	.9546	.9542	.9540	.9538	.9533
.0005	.9519	.9516	.9512	.9508	.9506	.9504	.9500	.9496	.9491	.9488	.9486	.9481
.0006	.9475	.9472	.9468	.9464	.9461	.9460	.9455	.9450	.9445	.9442	.9440	.9434
.0007	.9436	.9432	.9428	.9424	.9421	.9419	.9414	.9409	.9403	.9400	.9398	.9391
.0008	.9399	.9395	.9391	.9386	.9383	.9381	.9376	.9371	.9365	.9361	.9359	.9352
.0009	.9365	.9361	.9356	.9352	.9348	.9346	.9341	.9335	.9329	.9325	.9322	.9316
.0010	.9334	.9329	.9324	.9319	.9316	.9313	.9308	.9302	.9295	.9291	.9288	.9281
.0020	.9084	.9078	.9071	.9065	.9060	.9057	.9049	.9041	.9032	.9027	.9023	.9014
.0030	.8903	.8895	.8887	.8879	.8874	.8870	.8861	.8851	.8841	.8835	.8830	.8819
.0040	.8755	.8747	.8738	.8729	.8723	.8719	.8709	.8698	.8686	.8679	.8674	.8661
.0050	.8630	.8621	.8612	.8602	.8595	.8591	.8579	.8567	.8555	.8547	.8542	.8528
.0060	.8521	.8511	.8501	.8490	.8483	.8478	.8466	.8453	.8439	.8431	.8425	.8410
.0070	.8422	.8412	.8401	.8390	.8383	.8377	.8364	.8351	.8336	.8328	.8322	.8306
.0080	.8333	.8323	.8311	.8299	.8291	.8286	.8272	.8258	.8243	.8234	.8227	.8211
.0090	.8252	.8240	.8229	.8216	.8208	.8202	.8188	.8173	.8157	.8148	.8141	.8124
.0100	.8176	.8164	.8152	.8139	.8131	.8125	.8110	.8095	.8078	.8068	.8061	.8043
.0200	.7622	.7607	.7592	.7575	.7565	.7557	.7539	.7520	.7499	.7487	.7478	.7455
.0300	.7256	.7239	.7222	.7204	.7192	.7183	.7163	.7141	.7118	.7104	.7094	.7069
.0400	.6981	.6963	.6945	.6925	.6912	.6903	.6881	.6858	.6833	.6818	.6807	.6780
.0500	.6762	.6743	.6724	.6703	.6689	.6680	.6657	.6632	.6606	.6590	.6579	.6550
.0600	.6581	.6561	.6541	.6519	.6505	.6495	.6471	.6446	.6418	.6402	.6390	.6361
.0700	.6427	.6406	.6385	.6363	.6348	.6338	.6313	.6287	.6259	.6242	.6230	.6200
.0800	.6293	.6273	.6251	.6228	.6213	.6203	.6177	.6150	.6121	.6104	.6092	.6061
.0900	.6176	.6155	.6133	.6109	.6094	.6084	.6058	.6030	.6001	.5983	.5971	.5939
.1000	.6072	.6051	.6028	.6004	.5989	.5978	.5952	.5924	.5894	.5876	.5864	.5831

TABLE 59. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9758	.9756	.9753	.9750	.9747	.9744	.9741	.9738	.9734	.9731	.9727
.0002	.9662	.9658	.9654	.9650	.9646	.9642	.9637	.9633	.9628	.9623	.9618
.0003	.9589	.9584	.9580	.9575	.9570	.9565	.9559	.9554	.9548	.9542	.9536
.0004	.9528	.9523	.9518	.9512	.9507	.9501	.9495	.9488	.9481	.9475	.9467
.0005	.9475	.9470	.9464	.9458	.9452	.9445	.9438	.9431	.9424	.9416	.9408
.0006	.9428	.9422	.9416	.9409	.9402	.9395	.9388	.9380	.9372	.9364	.9355
.0007	.9385	.9379	.9372	.9365	.9358	.9350	.9342	.9333	.9325	.9316	.9307
.0008	.9346	.9339	.9331	.9324	.9316	.9308	.9299	.9291	.9281	.9272	.9262
.0009	.9309	.9301	.9294	.9286	.9278	.9269	.9260	.9251	.9241	.9231	.9221
.0010	.9274	.9266	.9258	.9250	.9241	.9232	.9223	.9213	.9203	.9193	.9182
.0020	.9004	.8993	.8982	.8971	.8960	.8947	.8935	.8922	.8908	.8894	.8879
.0030	.8807	.8795	.8782	.8769	.8755	.8741	.8726	.8710	.8694	.8678	.8660
.0040	.8648	.8634	.8620	.8605	.8590	.8574	.8557	.8539	.8521	.8503	.8483
.0050	.8513	.8498	.8482	.8466	.8449	.8432	.8414	.8394	.8375	.8355	.8333
.0060	.8395	.8379	.8362	.8345	.8327	.8308	.8288	.8268	.8247	.8225	.8202
.0070	.8289	.8272	.8254	.8236	.8217	.8197	.8176	.8155	.8133	.8110	.8086
.0080	.8194	.8175	.8157	.8138	.8118	.8097	.8075	.8052	.8029	.8005	.7980
.0090	.8106	.8087	.8068	.8048	.8027	.8005	.7982	.7959	.7935	.7910	.7883
.0100	.8025	.8005	.7985	.7964	.7943	.7920	.7897	.7872	.7847	.7822	.7794
.0200	.7432	.7408	.7383	.7357	.7330	.7302	.7273	.7242	.7211	.7180	.7146
.0300	.7043	.7016	.6988	.6959	.6929	.6897	.6865	.6831	.6796	.6761	.6723
.0400	.6753	.6723	.6693	.6662	.6630	.6596	.6561	.6525	.6488	.6450	.6410
.0500	.6521	.6490	.6459	.6426	.6392	.6357	.6321	.6282	.6244	.6204	.6162
.0600	.6330	.6298	.6265	.6231	.6197	.6160	.6122	.6083	.6042	.6001	.5958
.0700	.6168	.6135	.6102	.6067	.6031	.5993	.5954	.5914	.5872	.5830	.5785
.0800	.6029	.5995	.5960	.5925	.5888	.5849	.5810	.5768	.5726	.5683	.5637
.0900	.5906	.5872	.5837	.5800	.5763	.5723	.5683	.5641	.5598	.5554	.5508
.1000	.5798	.5763	.5727	.5690	.5652	.5612	.5571	.5529	.5485	.5441	.5393

TABLE 60. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9670	.9668	.9665	.9663	.9661	.9660	.9657	.9654	.9651	.9649	.9647	.9644
.0002	.9539	.9535	.9532	.9528	.9526	.9525	.9520	.9516	.9512	.9509	.9507	.9502
.0003	.9440	.9436	.9432	.9428	.9425	.9423	.9418	.9413	.9407	.9404	.9402	.9396
.0004	.9358	.9354	.9349	.9344	.9341	.9339	.9333	.9327	.9321	.9317	.9315	.9308
.0005	.9287	.9282	.9277	.9272	.9268	.9266	.9259	.9253	.9246	.9242	.9239	.9231
.0006	.9224	.9218	.9213	.9207	.9203	.9200	.9194	.9187	.9179	.9175	.9171	.9163
.0007	.9166	.9160	.9154	.9148	.9144	.9141	.9134	.9126	.9118	.9114	.9110	.9101
.0008	.9113	.9107	.9100	.9094	.9089	.9086	.9079	.9071	.9062	.9057	.9054	.9044
.0009	.9063	.9057	.9050	.9043	.9039	.9036	.9028	.9019	.9010	.9005	.9001	.8991
.0010	.9017	.9011	.9003	.8996	.8991	.8988	.8980	.8971	.8962	.8956	.8952	.8942
.0020	.8658	.8649	.8640	.8630	.8624	.8619	.8608	.8597	.8584	.8577	.8571	.8557
.0030	.8400	.8389	.8378	.8367	.8359	.8354	.8341	.8327	.8313	.8304	.8298	.8282
.0040	.8193	.8181	.8169	.8156	.8147	.8142	.8127	.8112	.8095	.8086	.8079	.8061
.0050	.8017	.8005	.7992	.7978	.7969	.7962	.7946	.7930	.7912	.7902	.7894	.7875
.0060	.7865	.7852	.7837	.7823	.7813	.7806	.7789	.7772	.7753	.7742	.7734	.7713
.0070	.7730	.7715	.7700	.7685	.7675	.7667	.7650	.7631	.7611	.7600	.7591	.7569
.0080	.7607	.7593	.7577	.7560	.7550	.7542	.7524	.7505	.7484	.7471	.7463	.7440
.0090	.7496	.7480	.7464	.7447	.7436	.7428	.7409	.7389	.7368	.7355	.7346	.7322
.0100	.7393	.7377	.7360	.7343	.7332	.7323	.7304	.7283	.7261	.7247	.7238	.7214
.0200	.6654	.6635	.6615	.6593	.6580	.6570	.6546	.6521	.6494	.6478	.6467	.6437
.0300	.6181	.6160	.6137	.6114	.6099	.6088	.6062	.6035	.6005	.5988	.5975	.5943
.0400	.5833	.5811	.5787	.5763	.5747	.5736	.5708	.5679	.5648	.5630	.5617	.5583
.0500	.5561	.5538	.5513	.5488	.5471	.5459	.5431	.5401	.5369	.5350	.5336	.5302
.0600	.5338	.5315	.5290	.5263	.5247	.5235	.5205	.5175	.5142	.5122	.5108	.5073
.0700	.5152	.5128	.5102	.5075	.5058	.5046	.5016	.4985	.4952	.4932	.4918	.4881
.0800	.4992	.4968	.4942	.4915	.4897	.4885	.4855	.4823	.4789	.4769	.4755	.4718
.0900	.4854	.4829	.4803	.4775	.4758	.4745	.4715	.4683	.4649	.4628	.4614	.4577
.1000	.4732	.4707	.4680	.4653	.4635	.4622	.4592	.4559	.4525	.4504	.4490	.4453

TABLE 60. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*—Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9640	.9636	.9632	.9628	.9623	.9619	.9614	.9609	.9604	.9599	.9593
.0002	.9497	.9491	.9486	.9480	.9474	.9468	.9461	.9454	.9447	.9440	.9432
.0003	.9390	.9383	.9376	.9369	.9362	.9354	.9346	.9338	.9330	.9321	.9311
.0004	.9301	.9293	.9286	.9278	.9269	.9261	.9252	.9242	.9232	.9222	.9212
.0005	.9224	.9215	.9207	.9198	.9189	.9179	.9169	.9159	.9148	.9137	.9125
.0006	.9155	.9146	.9137	.9127	.9117	.9107	.9096	.9084	.9073	.9061	.9048
.0007	.9092	.9083	.9073	.9062	.9052	.9041	.9029	.9017	.9005	.8992	.8978
.0008	.9035	.9024	.9014	.9003	.8992	.8980	.8968	.8955	.8942	.8928	.8914
.0009	.8981	.8970	.8959	.8948	.8936	.8924	.8911	.8897	.8883	.8869	.8854
.0010	.8931	.8920	.8908	.8896	.8884	.8871	.8858	.8843	.8829	.8814	.8798
.0020	.8543	.8528	.8513	.8497	.8481	.8463	.8446	.8427	.8408	.8388	.8367
.0030	.8265	.8248	.8230	.8211	.8192	.8172	.8151	.8129	.8106	.8083	.8059
.0040	.8042	.8023	.8003	.7982	.7961	.7939	.7915	.7891	.7866	.7841	.7813
.0050	.7855	.7834	.7812	.7790	.7767	.7742	.7717	.7691	.7664	.7637	.7607
.0060	.7692	.7669	.7647	.7623	.7598	.7572	.7546	.7518	.7489	.7460	.7429
.0070	.7547	.7524	.7500	.7474	.7449	.7421	.7393	.7364	.7334	.7303	.7271
.0080	.7417	.7392	.7367	.7341	.7314	.7286	.7257	.7226	.7195	.7163	.7129
.0090	.7298	.7272	.7246	.7219	.7191	.7162	.7132	.7100	.7068	.7035	.6999
.0100	.7189	.7162	.7136	.7108	.7079	.7049	.7017	.6985	.6951	.6917	.6881
.0200	.6408	.6376	.6344	.6310	.6276	.6240	.6202	.6164	.6124	.6083	.6040
.0300	.5911	.5876	.5841	.5805	.5768	.5728	.5688	.5646	.5603	.5559	.5513
.0400	.5549	.5512	.5476	.5437	.5398	.5357	.5315	.5271	.5226	.5180	.5132
.0500	.5266	.5229	.5191	.5151	.5111	.5068	.5025	.4980	.4933	.4887	.4837
.0600	.5037	.4998	.4959	.4919	.4878	.4834	.4790	.4744	.4697	.4649	.4599
.0700	.4845	.4806	.4766	.4725	.4683	.4639	.4595	.4548	.4500	.4452	.4401
.0800	.4681	.4641	.4602	.4560	.4518	.4473	.4428	.4381	.4333	.4284	.4232
.0900	.4539	.4499	.4459	.4417	.4375	.4330	.4284	.4237	.4188	.4140	.4088
.1000	.4415	.4375	.4334	.4292	.4249	.4204	.4159	.4111	.4062	.4013	.3961

TABLE 61. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*
(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9562	.9559	.9556	.9553	.9550	.9549	.9545	.9541	.9537	.9534	.9532	.9528
.0002	.9390	.9385	.9381	.9376	.9373	.9371	.9366	.9360	.9354	.9351	.9348	.9342
.0003	.9260	.9255	.9250	.9244	.9241	.9238	.9232	.9225	.9218	.9214	.9211	.9203
.0004	.9153	.9148	.9142	.9135	.9131	.9128	.9121	.9113	.9105	.9100	.9097	.9088
.0005	.9061	.9055	.9048	.9041	.9036	.9033	.9025	.9017	.9008	.9002	.8998	.8989
.0006	.8978	.8972	.8964	.8957	.8952	.8948	.8940	.8931	.8921	.8915	.8911	.8900
.0007	.8904	.8896	.8889	.8880	.8875	.8871	.8862	.8853	.8842	.8836	.8831	.8820
.0008	.8835	.8827	.8819	.8810	.8805	.8801	.8791	.8781	.8770	.8763	.8759	.8746
.0009	.8771	.8763	.8754	.8745	.8739	.8735	.8725	.8714	.8703	.8696	.8691	.8678
.0010	.8711	.8703	.8694	.8684	.8678	.8674	.8663	.8652	.8640	.8633	.8628	.8614
.0020	.8252	.8241	.8229	.8217	.8209	.8203	.8189	.8174	.8158	.8149	.8142	.8124
.0030	.7926	.7912	.7899	.7884	.7875	.7868	.7852	.7835	.7816	.7805	.7797	.7777
.0040	.7666	.7651	.7636	.7620	.7610	.7602	.7584	.7565	.7545	.7533	.7524	.7502
.0050	.7448	.7433	.7416	.7399	.7388	.7380	.7360	.7340	.7318	.7305	.7296	.7272
.0060	.7260	.7243	.7226	.7208	.7196	.7188	.7167	.7146	.7122	.7108	.7099	.7073
.0070	.7094	.7076	.7058	.7039	.7027	.7018	.6996	.6974	.6950	.6935	.6925	.6898
.0080	.6945	.6927	.6908	.6888	.6875	.6866	.6843	.6820	.6795	.6780	.6769	.6742
.0090	.6809	.6790	.6771	.6750	.6737	.6728	.6705	.6680	.6654	.6639	.6628	.6599
.0100	.6685	.6666	.6646	.6624	.6611	.6601	.6577	.6553	.6526	.6510	.6499	.6470
.0200	.5809	.5787	.5763	.5739	.5723	.5711	.5684	.5655	.5624	.5605	.5592	.5558
.0300	.5265	.5241	.5216	.5189	.5172	.5160	.5131	.5100	.5067	.5047	.5033	.4997
.0400	.4874	.4849	.4823	.4795	.4778	.4765	.4735	.4703	.4669	.4648	.4634	.4597
.0500	.4573	.4547	.4521	.4493	.4475	.4462	.4431	.4399	.4364	.4343	.4329	.4291
.0600	.4331	.4305	.4278	.4250	.4232	.4219	.4187	.4155	.4119	.4098	.4084	.4046
.0700	.4130	.4104	.4077	.4049	.4030	.4017	.3986	.3953	.3917	.3896	.3882	.3843
.0800	.3960	.3934	.3907	.3879	.3860	.3847	.3815	.3783	.3747	.3726	.3711	.3673
.0900	.3815	.3788	.3761	.3732	.3714	.3701	.3669	.3636	.3601	.3580	.3565	.3527
.1000	.3687	.3661	.3634	.3605	.3587	.3574	.3542	.3509	.3474	.3453	.3438	.3400

TABLE 61. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9523	.9517	.9512	.9507	.9501	.9495	.9489	.9482	.9475	.9469	.9461
.0002	.9335	.9328	.9320	.9313	.9305	.9297	.9288	.9279	.9270	.9260	.9250
.0003	.9195	.9186	.9177	.9168	.9159	.9149	.9138	.9127	.9116	.9105	.9093
.0004	.9079	.9069	.9059	.9049	.9038	.9026	.9015	.9002	.8990	.8977	.8963
.0005	.8978	.8968	.8957	.8945	.8933	.8921	.8908	.8894	.8880	.8866	.8851
.0006	.8889	.8878	.8866	.8853	.8840	.8827	.8813	.8798	.8783	.8768	.8751
.0007	.8808	.8796	.8783	.8770	.8756	.8742	.8727	.8711	.8695	.8679	.8661
.0008	.8734	.8721	.8707	.8693	.8679	.8664	.8648	.8632	.8615	.8597	.8579
.0009	.8665	.8651	.8637	.8623	.8607	.8591	.8575	.8558	.8540	.8522	.8502
.0010	.8601	.8586	.8572	.8556	.8540	.8524	.8506	.8488	.8470	.8451	.8430
.0020	.8107	.8088	.8068	.8048	.8028	.8006	.7983	.7960	.7935	.7911	.7884
.0030	.7756	.7735	.7712	.7689	.7665	.7640	.7614	.7586	.7558	.7530	.7499
.0040	.7479	.7455	.7430	.7405	.7378	.7351	.7322	.7292	.7261	.7230	.7196
.0050	.7247	.7221	.7195	.7168	.7139	.7109	.7079	.7047	.7014	.6980	.6944
.0060	.7048	.7020	.6992	.6963	.6933	.6902	.6870	.6836	.6801	.6766	.6728
.0070	.6871	.6843	.6814	.6783	.6752	.6719	.6685	.6650	.6614	.6577	.6538
.0080	.6714	.6684	.6654	.6622	.6590	.6556	.6521	.6484	.6447	.6409	.6368
.0090	.6571	.6540	.6509	.6476	.6443	.6408	.6372	.6334	.6296	.6256	.6215
.0100	.6440	.6408	.6376	.6343	.6309	.6273	.6236	.6197	.6158	.6118	.6075
.0200	.5524	.5488	.5451	.5412	.5373	.5332	.5290	.5245	.5200	.5155	.5106
.0300	.4961	.4922	.4883	.4842	.4801	.4757	.4713	.4666	.4619	.4571	.4520
.0400	.4560	.4520	.4480	.4438	.4395	.4351	.4305	.4258	.4209	.4160	.4108
.0500	.4253	.4212	.4172	.4129	.4086	.4041	.3995	.3947	.3898	.3849	.3797
.0600	.4007	.3967	.3926	.3883	.3840	.3794	.3748	.3700	.3651	.3602	.3549
.0700	.3805	.3764	.3723	.3681	.3637	.3592	.3545	.3497	.3449	.3399	.3347
.0800	.3635	.3594	.3553	.3510	.3467	.3421	.3375	.3327	.3279	.3230	.3178
.0900	.3488	.3448	.3407	.3364	.3321	.3276	.3230	.3182	.3134	.3085	.3034
.1000	.3362	.3321	.3280	.3238	.3195	.3150	.3104	.3057	.3009	.2960	.2909

TABLE 62. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*
(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9351	.9346	.9341	.9337	.9333	.9331	.9325	.9320	.9313	.9309	.9307	.9300
.0002	.9098	.9092	.9086	.9079	.9075	.9072	.9064	.9056	.9047	.9042	.9038	.9029
.0003	.8911	.8904	.8896	.8888	.8883	.8879	.8870	.8860	.8850	.8844	.8839	.8828
.0004	.8757	.8749	.8740	.8731	.8725	.8721	.8711	.8700	.8688	.8681	.8676	.8663
.0005	.8625	.8616	.8606	.8596	.8590	.8585	.8574	.8562	.8549	.8541	.8536	.8522
.0006	.8508	.8498	.8487	.8477	.8470	.8465	.8452	.8440	.8426	.8417	.8412	.8396
.0007	.8401	.8391	.8380	.8368	.8361	.8356	.8343	.8329	.8314	.8306	.8299	.8283
.0008	.8304	.8293	.8282	.8270	.8262	.8256	.8242	.8228	.8213	.8203	.8197	.8180
.0009	.8215	.8203	.8191	.8178	.8170	.8164	.8150	.8135	.8119	.8109	.8102	.8084
.0010	.8131	.8119	.8106	.8093	.8084	.8078	.8063	.8048	.8031	.8021	.8014	.7995
.0020	.7497	.7481	.7465	.7448	.7437	.7429	.7410	.7390	.7369	.7356	.7347	.7323
.0030	.7056	.7038	.7020	.7000	.6988	.6979	.6957	.6935	.6910	.6895	.6885	.6858
.0040	.6712	.6693	.6673	.6652	.6638	.6628	.6605	.6580	.6554	.6538	.6527	.6498
.0050	.6428	.6408	.6387	.6364	.6350	.6340	.6315	.6289	.6260	.6244	.6232	.6201
.0060	.6186	.6165	.6143	.6119	.6104	.6094	.6067	.6040	.6011	.5993	.5981	.5949
.0070	.5975	.5953	.5930	.5906	.5890	.5879	.5852	.5824	.5793	.5775	.5763	.5730
.0080	.5787	.5765	.5741	.5716	.5700	.5689	.5661	.5632	.5601	.5582	.5569	.5535
.0090	.5619	.5596	.5571	.5546	.5530	.5518	.5490	.5460	.5428	.5409	.5396	.5361
.0100	.5466	.5442	.5418	.5392	.5375	.5363	.5334	.5304	.5272	.5252	.5239	.5204
.0200	.4428	.4402	.4375	.4347	.4329	.4316	.4285	.4253	.4217	.4197	.4182	.4144
.0300	.3820	.3794	.3767	.3738	.3720	.3707	.3675	.3642	.3606	.3585	.3571	.3532
.0400	.3403	.3377	.3349	.3321	.3303	.3290	.3258	.3225	.3190	.3169	.3155	.3117
.0500	.3092	.3066	.3040	.3011	.2993	.2981	.2949	.2917	.2883	.2862	.2848	.2811
.0600	.2850	.2825	.2798	.2770	.2753	.2740	.2709	.2678	.2644	.2624	.2610	.2573
.0700	.2654	.2629	.2603	.2576	.2559	.2546	.2516	.2485	.2452	.2432	.2418	.2383
.0800	.2492	.2468	.2442	.2415	.2398	.2386	.2357	.2326	.2294	.2274	.2261	.2226
.0900	.2356	.2332	.2307	.2280	.2264	.2252	.2223	.2193	.2161	.2142	.2129	.2095
.1000	.2239	.2215	.2191	.2165	.2148	.2137	.2108	.2079	.2048	.2029	.2016	.1983

TABLE 62. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9293	.9285	.9277	.9269	.9261	.9252	.9243	.9233	.9224	.9213	.9203
.0002	.9019	.9009	.8998	.8987	.8976	.8964	.8951	.8938	.8925	.8911	.8896
.0003	.8816	.8804	.8792	.8778	.8765	.8750	.8736	.8720	.8704	.8688	.8670
.0004	.8650	.8636	.8622	.8607	.8592	.8576	.8559	.8542	.8524	.8505	.8486
.0005	.8507	.8492	.8477	.8460	.8443	.8426	.8407	.8388	.8369	.8349	.8327
.0006	.8381	.8364	.8348	.8330	.8312	.8293	.8273	.8253	.8232	.8210	.8187
.0007	.8267	.8249	.8232	.8213	.8194	.8173	.8153	.8131	.8108	.8085	.8061
.0008	.8163	.8144	.8125	.8106	.8085	.8064	.8042	.8019	.7996	.7971	.7946
.0009	.8066	.8047	.8027	.8007	.7986	.7963	.7940	.7916	.7892	.7866	.7839
.0010	.7976	.7956	.7936	.7915	.7893	.7869	.7846	.7821	.7795	.7769	.7741
.0020	.7299	.7273	.7247	.7220	.7192	.7163	.7133	.7101	.7069	.7036	.7000
.0030	.6831	.6802	.6773	.6742	.6711	.6677	.6643	.6608	.6571	.6534	.6494
.0040	.6468	.6437	.6405	.6372	.6338	.6302	.6265	.6227	.6188	.6148	.6105
.0050	.6170	.6137	.6103	.6068	.6032	.5995	.5956	.5915	.5874	.5832	.5787
.0060	.5916	.5882	.5847	.5811	.5773	.5734	.5694	.5652	.5609	.5565	.5519
.0070	.5696	.5660	.5624	.5587	.5548	.5508	.5466	.5423	.5379	.5334	.5286
.0080	.5501	.5464	.5427	.5389	.5350	.5308	.5266	.5221	.5176	.5130	.5082
.0090	.5326	.5289	.5251	.5212	.5172	.5129	.5086	.5041	.4995	.4949	.4899
.0100	.5168	.5130	.5092	.5052	.5011	.4968	.4924	.4879	.4832	.4785	.4735
.0200	.4106	.4065	.4024	.3982	.3939	.3893	.3847	.3799	.3750	.3701	.3648
.0300	.3494	.3453	.3412	.3370	.3326	.3281	.3235	.3188	.3139	.3091	.3039
.0400	.3079	.3039	.2998	.2957	.2914	.2870	.2825	.2778	.2731	.2684	.2633
.0500	.2773	.2734	.2694	.2654	.2612	.2569	.2525	.2480	.2434	.2388	.2339
.0600	.2537	.2498	.2460	.2420	.2379	.2337	.2295	.2251	.2206	.2162	.2115
.0700	.2347	.2309	.2272	.2233	.2193	.2152	.2111	.2068	.2025	.1982	.1936
.0800	.2191	.2154	.2118	.2080	.2041	.2001	.1961	.1919	.1877	.1835	.1791
.0900	.2060	.2024	.1988	.1951	.1914	.1875	.1836	.1795	.1754	.1714	.1671
.1000	.1949	.1914	.1879	.1842	.1806	.1768	.1729	.1690	.1650	.1610	.1569

TABLE 63. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9144	.9138	.9132	.9125	.9121	.9118	.9111	.9103	.9095	.9090	.9087	.9077
.0002	.8816	.8809	.8800	.8791	.8786	.8782	.8772	.8761	.8750	.8744	.8739	.8727
.0003	.8575	.8566	.8556	.8546	.8539	.8534	.8522	.8510	.8497	.8489	.8483	.8469
.0004	.8379	.8368	.8357	.8345	.8338	.8332	.8319	.8305	.8290	.8281	.8275	.8259
.0005	.8210	.8198	.8186	.8174	.8165	.8159	.8145	.8130	.8114	.8104	.8097	.8079
.0006	.8061	.8049	.8036	.8022	.8013	.8007	.7992	.7976	.7958	.7948	.7940	.7921
.0007	.7928	.7914	.7901	.7886	.7877	.7870	.7854	.7837	.7818	.7807	.7799	.7779
.0008	.7806	.7792	.7777	.7762	.7752	.7745	.7728	.7710	.7691	.7679	.7671	.7650
.0009	.7693	.7679	.7664	.7648	.7638	.7630	.7613	.7594	.7574	.7562	.7553	.7531
.0010	.7589	.7574	.7558	.7542	.7531	.7524	.7505	.7486	.7465	.7452	.7444	.7421
.0020	.6810	.6792	.6772	.6751	.6738	.6729	.6706	.6682	.6655	.6640	.6629	.6601
.0030	.6281	.6261	.6239	.6216	.6201	.6191	.6165	.6138	.6109	.6092	.6080	.6048
.0040	.5876	.5854	.5831	.5806	.5791	.5779	.5752	.5723	.5693	.5674	.5661	.5628
.0050	.5548	.5524	.5500	.5474	.5458	.5446	.5418	.5388	.5356	.5336	.5323	.5288
.0060	.5271	.5247	.5222	.5195	.5178	.5166	.5137	.5106	.5073	.5053	.5039	.5003
.0070	.5032	.5008	.4982	.4955	.4937	.4925	.4895	.4864	.4830	.4809	.4795	.4759
.0080	.4823	.4798	.4771	.4744	.4726	.4714	.4683	.4651	.4617	.4596	.4582	.4545
.0090	.4636	.4611	.4584	.4557	.4539	.4526	.4495	.4463	.4428	.4407	.4393	.4355
.0100	.4469	.4443	.4416	.4388	.4370	.4358	.4326	.4294	.4259	.4238	.4223	.4185
.0200	.3375	.3349	.3322	.3293	.3275	.3262	.3231	.3198	.3163	.3142	.3127	.3090
.0300	.2772	.2747	.2720	.2693	.2675	.2663	.2632	.2601	.2567	.2547	.2533	.2497
.0400	.2375	.2351	.2326	.2300	.2283	.2271	.2242	.2212	.2180	.2161	.2148	.2113
.0500	.2091	.2068	.2044	.2018	.2002	.1991	.1963	.1935	.1904	.1886	.1874	.1841
.0600	.1875	.1853	.1830	.1806	.1791	.1780	.1753	.1726	.1697	.1680	.1668	.1637
.0700	.1706	.1684	.1662	.1639	.1624	.1614	.1589	.1562	.1535	.1518	.1507	.1477
.0800	.1569	.1548	.1527	.1504	.1490	.1480	.1456	.1431	.1404	.1388	.1377	.1349
.0900	.1455	.1435	.1415	.1393	.1380	.1370	.1346	.1322	.1297	.1282	.1271	.1244
.1000	.1360	.1341	.1321	.1300	.1287	.1277	.1255	.1232	.1207	.1192	.1182	.1156

TABLE 63. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9068	.9058	.9048	.9038	.9027	.9015	.9004	.8991	.8978	.8965	.8951
.0002	.8714	.8701	.8687	.8673	.8658	.8643	.8627	.8610	.8593	.8575	.8556
.0003	.8454	.8438	.8422	.8405	.8388	.8370	.8351	.8331	.8311	.8290	.8268
.0004	.8242	.8224	.8206	.8188	.8168	.8148	.8127	.8104	.8082	.8058	.8034
.0005	.8061	.8042	.8022	.8002	.7980	.7958	.7935	.7911	.7886	.7861	.7834
.0006	.7902	.7881	.7860	.7838	.7815	.7791	.7767	.7741	.7715	.7688	.7659
.0007	.7759	.7737	.7714	.7691	.7667	.7642	.7616	.7589	.7561	.7532	.7502
.0008	.7628	.7605	.7582	.7558	.7533	.7506	.7479	.7450	.7421	.7391	.7359
.0009	.7509	.7485	.7460	.7435	.7409	.7381	.7353	.7323	.7293	.7262	.7228
.0010	.7397	.7372	.7347	.7321	.7294	.7265	.7236	.7205	.7174	.7142	.7107
.0020	.6572	.6541	.6510	.6478	.6444	.6409	.6373	.6335	.6297	.6258	.6216
.0030	.6016	.5982	.5948	.5912	.5875	.5836	.5797	.5755	.5713	.5670	.5624
.0040	.5594	.5558	.5521	.5483	.5444	.5403	.5361	.5317	.5273	.5227	.5179
.0050	.5253	.5215	.5177	.5137	.5097	.5054	.5011	.4966	.4919	.4872	.4823
.0060	.4967	.4928	.4889	.4849	.4807	.4764	.4719	.4673	.4625	.4577	.4527
.0070	.4722	.4682	.4643	.4601	.4559	.4515	.4470	.4422	.4374	.4326	.4274
.0080	.4507	.4467	.4427	.4385	.4343	.4298	.4252	.4204	.4156	.4107	.4055
.0090	.4317	.4277	.4237	.4194	.4151	.4106	.4060	.4012	.3964	.3914	.3862
.0100	.4147	.4107	.4066	.4023	.3980	.3935	.3889	.3841	.3792	.3743	.3690
.0200	.3052	.3011	.2971	.2929	.2887	.2843	.2798	.2751	.2704	.2657	.2607
.0300	.2461	.2423	.2384	.2345	.2305	.2263	.2221	.2177	.2134	.2090	.2043
.0400	.2079	.2043	.2007	.1970	.1932	.1893	.1853	.1813	.1772	.1731	.1688
.0500	.1809	.1774	.1740	.1705	.1670	.1633	.1596	.1558	.1520	.1481	.1441
.0600	.1606	.1573	.1541	.1508	.1474	.1440	.1405	.1369	.1333	.1297	.1260
.0700	.1448	.1417	.1386	.1355	.1323	.1290	.1257	.1223	.1189	.1156	.1120
.0800	.1321	.1291	.1262	.1232	.1202	.1171	.1139	.1107	.1075	.1043	.1010
.0900	.1217	.1189	.1161	.1132	.1103	.1073	.1043	.1013	.0982	.0952	.0920
.1000	.1130	.1103	.1076	.1048	.1021	.0992	.0963	.0934	.0905	.0876	.0846

TABLE 64. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9042	.9036	.9029	.9021	.9017	.9014	.9005	.8997	.8988	.8982	.8978	.8968
.0002	.8679	.8670	.8661	.8651	.8645	.8640	.8629	.8618	.8605	.8598	.8593	.8579
.0003	.8412	.8402	.8391	.8379	.8372	.8367	.8354	.8340	.8326	.8317	.8311	.8295
.0004	.8195	.8184	.8171	.8159	.8150	.8144	.8130	.8115	.8098	.8089	.8082	.8064
.0005	.8010	.7997	.7984	.7970	.7961	.7955	.7939	.7922	.7904	.7894	.7886	.7867
.0006	.7847	.7833	.7819	.7804	.7795	.7788	.7771	.7753	.7734	.7723	.7715	.7694
.0007	.7701	.7686	.7671	.7655	.7645	.7638	.7620	.7602	.7581	.7569	.7561	.7539
.0008	.7568	.7553	.7537	.7520	.7510	.7502	.7483	.7464	.7443	.7430	.7421	.7398
.0009	.7445	.7430	.7413	.7396	.7385	.7377	.7357	.7337	.7315	.7302	.7293	.7269
.0010	.7332	.7316	.7299	.7281	.7269	.7261	.7241	.7220	.7197	.7183	.7174	.7149
.0020	.6491	.6471	.6450	.6428	.6414	.6404	.6379	.6353	.6325	.6309	.6297	.6267
.0030	.5927	.5905	.5881	.5857	.5842	.5830	.5803	.5775	.5744	.5726	.5713	.5680
.0040	.5499	.5475	.5451	.5425	.5408	.5397	.5368	.5338	.5306	.5286	.5273	.5238
.0050	.5154	.5129	.5104	.5077	.5060	.5048	.5018	.4987	.4953	.4933	.4919	.4883
.0060	.4865	.4840	.4814	.4787	.4769	.4757	.4726	.4694	.4660	.4640	.4625	.4588
.0070	.4618	.4593	.4566	.4538	.4521	.4508	.4477	.4444	.4410	.4389	.4374	.4337
.0080	.4402	.4377	.4350	.4322	.4304	.4291	.4259	.4227	.4192	.4171	.4156	.4118
.0090	.4212	.4186	.4159	.4130	.4112	.4099	.4067	.4035	.3999	.3978	.3964	.3926
.0100	.4041	.4015	.3988	.3959	.3941	.3928	.3896	.3863	.3828	.3807	.3792	.3754
.0200	.2946	.2921	.2894	.2866	.2849	.2836	.2805	.2773	.2739	.2719	.2704	.2668
.0300	.2361	.2337	.2312	.2285	.2269	.2257	.2228	.2198	.2166	.2147	.2134	.2099
.0400	.1985	.1962	.1938	.1914	.1898	.1887	.1860	.1832	.1802	.1784	.1772	.1740
.0500	.1719	.1698	.1676	.1653	.1638	.1627	.1602	.1576	.1548	.1531	.1520	.1490
.0600	.1521	.1501	.1480	.1458	.1444	.1434	.1410	.1386	.1359	.1344	.1333	.1305
.0700	.1367	.1348	.1328	.1307	.1294	.1285	.1262	.1239	.1214	.1199	.1189	.1163
.0800	.1244	.1226	.1207	.1187	.1175	.1166	.1144	.1122	.1099	.1085	.1075	.1050
.0900	.1144	.1126	.1108	.1089	.1077	.1068	.1048	.1027	.1004	.0991	.0982	.0959
.1000	.1060	.1043	.1025	.1007	.0996	.0988	.0968	.0948	.0926	.0914	.0905	.0883

TABLE 64. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8958	.8947	.8936	.8924	.8912	.8899	.8886	.8872	.8858	.8844	.8828
.0002	.8565	.8551	.8536	.8520	.8504	.8487	.8469	.8450	.8431	.8412	.8391
.0003	.8278	.8261	.8243	.8225	.8206	.8185	.8165	.8143	.8121	.8098	.8073
.0004	.8045	.8026	.8006	.7985	.7964	.7942	.7919	.7894	.7869	.7844	.7817
.0005	.7847	.7826	.7804	.7782	.7759	.7734	.7709	.7683	.7656	.7628	.7599
.0006	.7673	.7650	.7627	.7603	.7578	.7552	.7525	.7497	.7468	.7439	.7408
.0007	.7516	.7493	.7468	.7443	.7417	.7389	.7361	.7331	.7301	.7270	.7237
.0008	.7375	.7350	.7324	.7298	.7270	.7242	.7212	.7181	.7149	.7117	.7083
.0009	.7244	.7218	.7192	.7164	.7136	.7106	.7076	.7043	.7010	.6977	.6941
.0010	.7124	.7097	.7070	.7041	.7012	.6981	.6949	.6916	.6882	.6847	.6810
.0020	.6236	.6203	.6170	.6135	.6100	.6062	.6024	.5984	.5943	.5902	.5857
.0030	.5646	.5610	.5574	.5536	.5497	.5457	.5415	.5371	.5327	.5282	.5234
.0040	.5202	.5164	.5126	.5086	.5046	.5003	.4959	.4914	.4867	.4820	.4770
.0050	.4846	.4807	.4768	.4727	.4685	.4641	.4596	.4550	.4502	.4454	.4402
.0060	.4551	.4511	.4471	.4429	.4387	.4342	.4296	.4249	.4200	.4151	.4100
.0070	.4299	.4259	.4218	.4176	.4133	.4087	.4041	.3994	.3945	.3896	.3843
.0080	.4080	.4039	.3998	.3956	.3913	.3867	.3821	.3773	.3724	.3675	.3622
.0090	.3887	.3846	.3805	.3763	.3719	.3674	.3628	.3579	.3531	.3481	.3429
.0100	.3715	.3674	.3633	.3591	.3547	.3502	.3456	.3408	.3359	.3310	.3258
.0200	.2631	.2592	.2553	.2513	.2472	.2429	.2386	.2341	.2297	.2251	.2204
.0300	.2065	.2029	.1993	.1956	.1919	.1880	.1840	.1800	.1759	.1718	.1675
.0400	.1708	.1675	.1642	.1608	.1573	.1537	.1501	.1464	.1427	.1390	.1351
.0500	.1461	.1429	.1399	.1367	.1335	.1302	.1269	.1235	.1201	.1167	.1132
.0600	.1278	.1249	.1220	.1190	.1161	.1130	.1099	.1068	.1036	.1005	.0972
.0700	.1137	.1110	.1083	.1055	.1027	.0999	.0970	.0941	.0911	.0882	.0852
.0800	.1026	.1000	.0974	.0948	.0922	.0895	.0868	.0841	.0813	.0786	.0758
.0900	.0935	.0911	.0887	.0862	.0837	.0812	.0786	.0761	.0735	.0709	.0683
.1000	.0860	.0837	.0814	.0791	.0767	.0743	.0719	.0695	.0670	.0646	.0621

TABLE 65. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8744	.8735	.8726	.8717	.8711	.8707	.8696	.8685	.8674	.8667	.8662	.8649
.0002	.8278	.8267	.8255	.8243	.8235	.8229	.8216	.8201	.8185	.8176	.8169	.8152
.0003	.7941	.7928	.7914	.7900	.7891	.7884	.7868	.7851	.7832	.7821	.7814	.7793
.0004	.7669	.7655	.7640	.7623	.7613	.7606	.7588	.7569	.7549	.7536	.7528	.7506
.0005	.7439	.7423	.7407	.7389	.7378	.7370	.7351	.7331	.7309	.7295	.7286	.7262
.0006	.7238	.7221	.7204	.7185	.7173	.7165	.7144	.7123	.7099	.7085	.7075	.7050
.0007	.7058	.7041	.7023	.7003	.6991	.6982	.6960	.6938	.6913	.6898	.6888	.6861
.0008	.6896	.6878	.6859	.6839	.6826	.6816	.6794	.6770	.6745	.6729	.6719	.6691
.0009	.6748	.6729	.6709	.6688	.6675	.6665	.6642	.6618	.6591	.6575	.6564	.6535
.0010	.6611	.6592	.6571	.6550	.6536	.6526	.6502	.6477	.6450	.6433	.6422	.6392
.0020	.5620	.5597	.5573	.5547	.5531	.5519	.5491	.5462	.5430	.5411	.5397	.5363
.0030	.4978	.4954	.4928	.4901	.4883	.4871	.4840	.4809	.4775	.4755	.4741	.4704
.0040	.4505	.4479	.4452	.4424	.4407	.4394	.4362	.4330	.4295	.4274	.4260	.4222
.0050	.4132	.4106	.4079	.4050	.4032	.4019	.3988	.3955	.3919	.3898	.3884	.3845
.0060	.3827	.3801	.3773	.3745	.3726	.3713	.3681	.3648	.3613	.3592	.3577	.3539
.0070	.3570	.3544	.3516	.3488	.3469	.3456	.3425	.3392	.3356	.3335	.3321	.3283
.0080	.3349	.3323	.3296	.3267	.3249	.3236	.3205	.3172	.3137	.3116	.3102	.3064
.0090	.3157	.3131	.3104	.3076	.3058	.3045	.3014	.2981	.2947	.2926	.2912	.2874
.0100	.2987	.2962	.2935	.2907	.2889	.2876	.2846	.2814	.2779	.2759	.2745	.2708
.0200	.1961	.1938	.1914	.1890	.1874	.1863	.1836	.1808	.1779	.1761	.1749	.1717
.0300	.1459	.1439	.1419	.1397	.1384	.1374	.1350	.1326	.1301	.1285	.1275	.1248
.0400	.1158	.1140	.1122	.1103	.1091	.1082	.1061	.1040	.1018	.1004	.0995	.0972
.0500	.0956	.0940	.0924	.0907	.0896	.0888	.0870	.0851	.0831	.0819	.0811	.0790
.0600	.0812	.0798	.0783	.0767	.0758	.0751	.0734	.0717	.0699	.0688	.0681	.0662
.0700	.0705	.0691	.0678	.0664	.0655	.0648	.0633	.0618	.0601	.0592	.0585	.0568
.0800	.0621	.0609	.0596	.0583	.0575	.0569	.0555	.0541	.0526	.0517	.0511	.0496
.0900	.0555	.0544	.0532	.0520	.0512	.0507	.0494	.0481	.0467	.0459	.0453	.0439
.1000	.0501	.0491	.0480	.0469	.0462	.0457	.0444	.0432	.0419	.0412	.0406	.0393

TABLE 65. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8635	.8621	.8607	.8592	.8576	.8560	.8543	.8525	.8507	.8489	.8469
.0002	.8134	.8116	.8097	.8077	.8056	.8035	.8013	.7989	.7965	.7941	.7915
.0003	.7773	.7751	.7729	.7706	.7682	.7657	.7631	.7604	.7576	.7548	.7518
.0004	.7483	.7459	.7434	.7409	.7382	.7354	.7326	.7296	.7265	.7234	.7200
.0005	.7238	.7212	.7185	.7158	.7129	.7099	.7069	.7036	.7003	.6970	.6934
.0006	.7024	.6996	.6968	.6939	.6909	.6877	.6845	.6811	.6776	.6740	.6702
.0007	.6834	.6805	.6776	.6745	.6714	.6680	.6646	.6611	.6574	.6537	.6498
.0008	.6663	.6633	.6602	.6570	.6538	.6503	.6468	.6431	.6393	.6354	.6313
.0009	.6506	.6475	.6444	.6411	.6377	.6341	.6305	.6267	.6228	.6188	.6146
.0010	.6362	.6330	.6298	.6264	.6229	.6193	.6155	.6116	.6076	.6035	.5992
.0020	.5328	.5290	.5253	.5213	.5173	.5131	.5088	.5043	.4997	.4950	.4901
.0030	.4667	.4627	.4587	.4546	.4503	.4459	.4414	.4366	.4318	.4269	.4218
.0040	.4184	.4143	.4102	.4060	.4017	.3972	.3925	.3877	.3829	.3779	.3727
.0050	.3807	.3766	.3725	.3682	.3639	.3593	.3547	.3499	.3450	.3401	.3349
.0060	.3500	.3460	.3419	.3376	.3333	.3288	.3242	.3194	.3146	.3097	.3045
.0070	.3244	.3204	.3163	.3121	.3078	.3033	.2988	.2941	.2893	.2845	.2794
.0080	.3026	.2986	.2946	.2904	.2862	.2818	.2773	.2726	.2679	.2632	.2582
.0090	.2837	.2797	.2757	.2716	.2675	.2631	.2587	.2541	.2495	.2449	.2400
.0100	.2671	.2632	.2593	.2552	.2511	.2468	.2425	.2380	.2335	.2290	.2242
.0200	.1686	.1653	.1620	.1586	.1551	.1516	.1480	.1443	.1406	.1370	.1331
.0300	.1221	.1192	.1164	.1136	.1107	.1077	.1047	.1016	.0986	.0955	.0924
.0400	.0948	.0923	.0899	.0874	.0849	.0824	.0798	.0772	.0746	.0720	.0693
.0500	.0769	.0747	.0726	.0704	.0682	.0660	.0638	.0615	.0592	.0570	.0547
.0600	.0644	.0624	.0605	.0586	.0566	.0546	.0527	.0506	.0487	.0467	.0447
.0700	.0551	.0533	.0516	.0499	.0481	.0463	.0446	.0428	.0410	.0393	.0375
.0800	.0480	.0464	.0448	.0432	.0417	.0400	.0385	.0368	.0352	.0337	.0321
.0900	.0425	.0410	.0395	.0381	.0366	.0352	.0337	.0322	.0308	.0294	.0279
.1000	.0380	.0366	.0353	.0339	.0326	.0312	.0299	.0286	.0272	.0259	.0246

TABLE 66. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Davies*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8361	.8350	.8339	.8327	.8320	.8314	.8301	.8287	.8272	.8263	.8256	.8240
.0002	.7773	.7759	.7744	.7729	.7719	.7712	.7694	.7676	.7657	.7645	.7637	.7615
.0003	.7354	.7338	.7321	.7303	.7291	.7283	.7263	.7242	.7220	.7206	.7197	.7172
.0004	.7020	.7002	.6984	.6964	.6952	.6943	.6921	.6898	.6873	.6858	.6848	.6821
.0005	.6740	.6721	.6702	.6681	.6667	.6658	.6634	.6610	.6583	.6567	.6556	.6528
.0006	.6498	.6479	.6458	.6435	.6421	.6411	.6387	.6361	.6333	.6316	.6305	.6275
.0007	.6285	.6264	.6242	.6219	.6204	.6194	.6168	.6141	.6113	.6095	.6083	.6052
.0008	.6093	.6071	.6049	.6025	.6010	.5999	.5972	.5945	.5915	.5897	.5885	.5852
.0009	.5919	.5897	.5873	.5849	.5834	.5822	.5795	.5767	.5736	.5718	.5705	.5672
.0010	.5759	.5737	.5713	.5688	.5672	.5661	.5633	.5604	.5572	.5554	.5541	.5507
.0020	.4638	.4612	.4586	.4558	.4540	.4528	.4496	.4464	.4430	.4409	.4394	.4357
.0030	.3946	.3920	.3892	.3864	.3845	.3832	.3801	.3768	.3732	.3711	.3696	.3658
.0040	.3453	.3427	.3400	.3371	.3353	.3340	.3309	.3276	.3241	.3220	.3205	.3167
.0050	.3078	.3052	.3025	.2997	.2979	.2966	.2935	.2903	.2868	.2848	.2833	.2796
.0060	.2778	.2753	.2726	.2699	.2681	.2669	.2638	.2607	.2573	.2553	.2539	.2503
.0070	.2532	.2508	.2482	.2455	.2438	.2426	.2396	.2365	.2333	.2313	.2300	.2265
.0080	.2326	.2302	.2277	.2250	.2234	.2222	.2193	.2163	.2132	.2113	.2100	.2066
.0090	.2150	.2126	.2102	.2076	.2060	.2049	.2021	.1992	.1961	.1943	.1930	.1897
.0100	.1997	.1974	.1951	.1926	.1910	.1899	.1872	.1844	.1814	.1796	.1784	.1752
.0200	.1139	.1122	.1103	.1085	.1073	.1064	.1044	.1023	.1000	.0987	.0978	.0955
.0300	.0768	.0754	.0740	.0725	.0716	.0709	.0693	.0676	.0659	.0649	.0642	.0624
.0400	.0564	.0553	.0541	.0529	.0521	.0516	.0503	.0489	.0475	.0467	.0461	.0447
.0500	.0437	.0428	.0418	.0407	.0401	.0396	.0385	.0374	.0363	.0356	.0351	.0339
.0600	.0352	.0343	.0335	.0326	.0321	.0317	.0307	.0298	.0288	.0282	.0278	.0268
.0700	.0291	.0284	.0276	.0269	.0264	.0260	.0252	.0244	.0236	.0230	.0227	.0218
.0800	.0246	.0240	.0233	.0226	.0222	.0219	.0212	.0205	.0197	.0193	.0190	.0182
.0900	.0212	.0206	.0200	.0194	.0190	.0188	.0181	.0175	.0168	.0164	.0162	.0155
.1000	.0185	.0180	.0174	.0169	.0166	.0163	.0157	.0152	.0146	.0142	.0140	.0134

TABLE 66. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Davies* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8223	.8205	.8187	.8168	.8148	.8128	.8106	.8084	.8061	.8038	.8012
.0002	.7593	.7570	.7547	.7522	.7496	.7470	.7442	.7413	.7384	.7353	.7321
.0003	.7147	.7120	.7093	.7065	.7036	.7005	.6974	.6941	.6907	.6872	.6835
.0004	.6793	.6764	.6735	.6704	.6672	.6638	.6604	.6568	.6531	.6494	.6454
.0005	.6498	.6467	.6436	.6403	.6369	.6333	.6297	.6258	.6219	.6180	.6137
.0006	.6244	.6211	.6178	.6143	.6108	.6071	.6032	.5992	.5952	.5910	.5866
.0007	.6020	.5986	.5951	.5915	.5879	.5840	.5800	.5759	.5717	.5674	.5628
.0008	.5819	.5784	.5749	.5712	.5674	.5634	.5593	.5551	.5507	.5463	.5416
.0009	.5638	.5602	.5566	.5528	.5489	.5448	.5406	.5363	.5318	.5273	.5225
.0010	.5472	.5435	.5398	.5360	.5320	.5278	.5236	.5192	.5146	.5100	.5051
.0020	.4319	.4279	.4238	.4196	.4153	.4108	.4062	.4014	.3965	.3916	.3864
.0030	.3620	.3579	.3538	.3495	.3452	.3406	.3360	.3312	.3264	.3215	.3163
.0040	.3129	.3089	.3048	.3006	.2964	.2919	.2874	.2827	.2780	.2732	.2682
.0050	.2759	.2720	.2680	.2639	.2598	.2555	.2511	.2466	.2420	.2374	.2326
.0060	.2467	.2429	.2390	.2351	.2311	.2269	.2227	.2183	.2139	.2095	.2049
.0070	.2229	.2192	.2155	.2117	.2078	.2038	.1998	.1956	.1914	.1871	.1827
.0080	.2032	.1996	.1960	.1923	.1886	.1847	.1808	.1768	.1727	.1687	.1644
.0090	.1864	.1829	.1795	.1759	.1723	.1686	.1649	.1610	.1571	.1532	.1492
.0100	.1720	.1687	.1653	.1619	.1584	.1548	.1512	.1475	.1438	.1401	.1362
.0200	.0931	.0907	.0883	.0858	.0834	.0808	.0783	.0757	.0731	.0706	.0680
.0300	.0606	.0587	.0569	.0550	.0531	.0512	.0493	.0474	.0455	.0437	.0417
.0400	.0432	.0417	.0403	.0388	.0373	.0358	.0344	.0329	.0314	.0300	.0285
.0500	.0327	.0315	.0303	.0291	.0279	.0267	.0255	.0243	.0231	.0219	.0208
.0600	.0258	.0248	.0237	.0227	.0217	.0207	.0197	.0187	.0178	.0168	.0159
.0700	.0210	.0201	.0192	.0183	.0175	.0166	.0158	.0150	.0141	.0134	.0126
.0800	.0174	.0167	.0159	.0152	.0144	.0137	.0130	.0123	.0116	.0109	.0102
.0900	.0148	.0141	.0135	.0128	.0122	.0115	.0109	.0103	.0096	.0091	.0085
.1000	.0128	.0122	.0116	.0110	.0104	.0098	.0093	.0087	.0082	.0077	.0072

TABLE 67. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*
(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881	.9880
.0002	.9844	.9843	.9842	.9840	.9840	.9839	.9838	.9836	.9835	.9834	.9834	.9832
.0003	.9810	.9808	.9807	.9806	.9805	.9804	.9802	.9801	.9799	.9798	.9797	.9795
.0004	.9781	.9780	.9778	.9776	.9775	.9775	.9773	.9771	.9769	.9768	.9767	.9765
.0005	.9756	.9755	.9753	.9751	.9750	.9749	.9747	.9745	.9743	.9742	.9741	.9738
.0006	.9734	.9732	.9730	.9728	.9727	.9726	.9724	.9722	.9719	.9718	.9717	.9714
.0007	.9714	.9712	.9710	.9708	.9706	.9705	.9703	.9701	.9698	.9696	.9695	.9692
.0008	.9695	.9693	.9691	.9688	.9687	.9686	.9683	.9681	.9678	.9676	.9675	.9672
.0009	.9678	.9675	.9673	.9670	.9669	.9668	.9665	.9663	.9660	.9658	.9657	.9653
.0010	.9661	.9659	.9656	.9654	.9652	.9651	.9648	.9645	.9642	.9640	.9639	.9636
.0020	.9531	.9528	.9525	.9521	.9519	.9517	.9513	.9509	.9505	.9503	.9501	.9496
.0030	.9435	.9431	.9427	.9423	.9421	.9419	.9414	.9409	.9404	.9401	.9399	.9394
.0040	.9357	.9353	.9348	.9343	.9340	.9338	.9333	.9328	.9322	.9318	.9316	.9310
.0050	.9290	.9285	.9280	.9275	.9272	.9269	.9264	.9258	.9251	.9247	.9245	.9238
.0060	.9231	.9225	.9220	.9214	.9211	.9208	.9202	.9196	.9189	.9185	.9182	.9175
.0070	.9177	.9172	.9166	.9160	.9156	.9154	.9147	.9140	.9133	.9128	.9125	.9118
.0080	.9129	.9123	.9117	.9110	.9106	.9104	.9097	.9089	.9082	.9077	.9074	.9066
.0090	.9084	.9078	.9071	.9065	.9060	.9057	.9050	.9043	.9035	.9030	.9026	.9018
.0100	.9042	.9036	.9029	.9022	.9018	.9015	.9007	.8999	.8991	.8986	.8982	.8973
.0200	.8730	.8722	.8713	.8704	.8699	.8695	.8685	.8674	.8664	.8657	.8652	.8641
.0300	.8518	.8508	.8498	.8488	.8482	.8477	.8466	.8454	.8441	.8434	.8428	.8415
.0400	.8355	.8345	.8334	.8322	.8315	.8310	.8298	.8285	.8271	.8263	.8257	.8242
.0500	.8223	.8212	.8200	.8188	.8180	.8175	.8161	.8147	.8133	.8124	.8118	.8102
.0600	.8112	.8100	.8088	.8075	.8067	.8061	.8047	.8032	.8017	.8007	.8001	.7984
.0700	.8017	.8004	.7991	.7977	.7969	.7963	.7948	.7933	.7917	.7907	.7900	.7883
.0800	.7933	.7920	.7907	.7892	.7884	.7878	.7862	.7846	.7830	.7820	.7813	.7795
.0900	.7859	.7845	.7832	.7817	.7808	.7802	.7786	.7770	.7753	.7742	.7735	.7716
.1000	.7793	.7779	.7765	.7750	.7741	.7734	.7718	.7701	.7683	.7673	.7665	.7646

TABLE 67. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9878	.9877	.9876	.9874	.9873	.9871	.9870	.9869	.9867	.9865
.0002	.9830	.9829	.9827	.9825	.9823	.9822	.9820	.9818	.9815	.9813	.9811
.0003	.9793	.9791	.9789	.9787	.9785	.9783	.9780	.9778	.9775	.9773	.9770
.0004	.9763	.9760	.9758	.9756	.9753	.9750	.9748	.9745	.9742	.9739	.9736
.0005	.9736	.9733	.9731	.9728	.9725	.9722	.9719	.9716	.9713	.9709	.9706
.0006	.9712	.9709	.9706	.9703	.9700	.9697	.9693	.9690	.9686	.9683	.9679
.0007	.9690	.9687	.9683	.9680	.9677	.9674	.9670	.9666	.9662	.9659	.9654
.0008	.9669	.9666	.9663	.9659	.9656	.9652	.9648	.9644	.9640	.9636	.9632
.0009	.9650	.9647	.9643	.9640	.9636	.9632	.9628	.9624	.9620	.9615	.9611
.0010	.9632	.9629	.9625	.9621	.9617	.9613	.9609	.9605	.9600	.9596	.9591
.0020	.9492	.9487	.9482	.9477	.9471	.9466	.9460	.9454	.9448	.9441	.9435
.0030	.9388	.9382	.9376	.9370	.9364	.9357	.9350	.9343	.9336	.9328	.9320
.0040	.9304	.9297	.9290	.9283	.9276	.9268	.9261	.9252	.9244	.9235	.9226
.0050	.9231	.9224	.9216	.9209	.9201	.9192	.9184	.9175	.9166	.9156	.9146
.0060	.9167	.9159	.9151	.9143	.9134	.9125	.9116	.9107	.9097	.9086	.9076
.0070	.9110	.9101	.9093	.9084	.9075	.9065	.9055	.9045	.9034	.9024	.9012
.0080	.9057	.9048	.9039	.9030	.9020	.9010	.9000	.8989	.8978	.8966	.8954
.0090	.9009	.9000	.8990	.8980	.8970	.8960	.8949	.8937	.8926	.8914	.8901
.0100	.8964	.8954	.8944	.8934	.8924	.8913	.8901	.8889	.8877	.8865	.8852
.0200	.8629	.8616	.8603	.8590	.8576	.8562	.8547	.8532	.8516	.8500	.8483
.0300	.8401	.8387	.8372	.8357	.8341	.8325	.8308	.8290	.8272	.8253	.8234
.0400	.8227	.8211	.8195	.8178	.8161	.8143	.8125	.8105	.8085	.8065	.8044
.0500	.8086	.8069	.8051	.8033	.8015	.7996	.7976	.7956	.7934	.7913	.7890
.0600	.7967	.7949	.7931	.7912	.7893	.7873	.7852	.7830	.7808	.7785	.7761
.0700	.7865	.7847	.7828	.7808	.7788	.7767	.7745	.7722	.7699	.7675	.7650
.0800	.7776	.7757	.7737	.7717	.7696	.7674	.7652	.7628	.7604	.7580	.7554
.0900	.7697	.7677	.7657	.7636	.7614	.7592	.7569	.7545	.7520	.7495	.7468
.1000	.7627	.7606	.7585	.7564	.7542	.7519	.7495	.7471	.7445	.7419	.7392

TABLE 68. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9777	.9776	.9774	.9773	.9772	.9770	.9768	.9766	.9765	.9764	.9762
.0002	.9690	.9688	.9686	.9683	.9682	.9681	.9678	.9676	.9673	.9671	.9670	.9667
.0003	.9623	.9620	.9618	.9615	.9613	.9612	.9609	.9606	.9602	.9600	.9599	.9595
.0004	.9567	.9564	.9561	.9558	.9556	.9555	.9551	.9547	.9543	.9541	.9539	.9535
.0005	.9519	.9516	.9512	.9508	.9506	.9505	.9501	.9497	.9492	.9490	.9488	.9483
.0006	.9475	.9472	.9468	.9464	.9462	.9460	.9456	.9451	.9447	.9444	.9442	.9437
.0007	.9436	.9432	.9428	.9424	.9421	.9419	.9415	.9410	.9405	.9402	.9400	.9394
.0008	.9399	.9395	.9391	.9387	.9384	.9382	.9377	.9372	.9367	.9363	.9361	.9355
.0009	.9365	.9361	.9357	.9352	.9349	.9347	.9342	.9336	.9331	.9327	.9325	.9319
.0010	.9334	.9329	.9324	.9319	.9316	.9314	.9309	.9303	.9297	.9294	.9291	.9285
.0020	.9084	.9078	.9072	.9065	.9061	.9058	.9051	.9043	.9035	.9030	.9027	.9018
.0030	.8903	.8895	.8888	.8880	.8875	.8871	.8863	.8854	.8844	.8838	.8834	.8824
.0040	.8755	.8747	.8739	.8730	.8724	.8720	.8711	.8701	.8690	.8683	.8679	.8667
.0050	.8630	.8621	.8612	.8602	.8596	.8592	.8581	.8570	.8559	.8552	.8547	.8534
.0060	.8521	.8511	.8501	.8490	.8484	.8479	.8468	.8456	.8444	.8436	.8431	.8417
.0070	.8422	.8412	.8402	.8390	.8384	.8379	.8367	.8354	.8341	.8333	.8327	.8313
.0080	.8333	.8323	.8311	.8300	.8293	.8287	.8275	.8262	.8248	.8239	.8234	.8219
.0090	.8252	.8240	.8229	.8217	.8209	.8204	.8191	.8177	.8163	.8154	.8148	.8132
.0100	.8176	.8164	.8152	.8140	.8132	.8126	.8113	.8099	.8084	.8074	.8068	.8052
.0200	.7622	.7607	.7592	.7576	.7567	.7560	.7542	.7525	.7506	.7494	.7486	.7466
.0300	.7256	.7239	.7222	.7204	.7194	.7186	.7166	.7146	.7125	.7112	.7104	.7081
.0400	.6981	.6963	.6945	.6926	.6914	.6906	.6885	.6863	.6841	.6827	.6817	.6793
.0500	.6762	.6743	.6724	.6704	.6692	.6683	.6661	.6638	.6614	.6600	.6590	.6564
.0600	.6581	.6561	.6541	.6520	.6507	.6498	.6475	.6452	.6427	.6412	.6401	.6375
.0700	.6427	.6406	.6386	.6364	.6351	.6341	.6318	.6293	.6268	.6252	.6242	.6214
.0800	.6293	.6273	.6251	.6229	.6215	.6206	.6182	.6157	.6131	.6114	.6104	.6075
.0900	.6176	.6155	.6133	.6111	.6097	.6087	.6062	.6037	.6010	.5994	.5983	.5954
.1000	.6072	.6051	.6029	.6006	.5992	.5981	.5956	.5931	.5904	.5887	.5875	.5846

TABLE 68. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9760	.9757	.9755	.9753	.9750	.9747	.9745	.9742	.9739	.9736	.9732
.0002	.9664	.9660	.9657	.9654	.9650	.9646	.9643	.9638	.9634	.9630	.9626
.0003	.9591	.9587	.9583	.9579	.9575	.9570	.9566	.9561	.9556	.9551	.9545
.0004	.9531	.9526	.9522	.9517	.9512	.9507	.9502	.9496	.9490	.9484	.9478
.0005	.9478	.9473	.9468	.9463	.9458	.9452	.9446	.9440	.9433	.9427	.9420
.0006	.9432	.9426	.9421	.9415	.9409	.9403	.9396	.9389	.9383	.9376	.9368
.0007	.9389	.9383	.9377	.9371	.9364	.9358	.9351	.9344	.9336	.9329	.9321
.0008	.9349	.9343	.9337	.9330	.9323	.9316	.9309	.9301	.9294	.9286	.9277
.0009	.9313	.9306	.9299	.9292	.9285	.9278	.9270	.9262	.9254	.9245	.9236
.0010	.9278	.9271	.9264	.9257	.9249	.9242	.9234	.9225	.9217	.9208	.9198
.0020	.9009	.9000	.8991	.8981	.8971	.8960	.8949	.8938	.8926	.8914	.8901
.0030	.8814	.8803	.8791	.8780	.8768	.8755	.8743	.8729	.8715	.8701	.8686
.0040	.8656	.8643	.8631	.8618	.8604	.8590	.8576	.8561	.8545	.8529	.8513
.0050	.8521	.8508	.8494	.8480	.8465	.8450	.8434	.8418	.8401	.8384	.8365
.0060	.8404	.8389	.8375	.8359	.8344	.8327	.8310	.8293	.8275	.8256	.8237
.0070	.8299	.8283	.8268	.8252	.8235	.8218	.8200	.8181	.8162	.8143	.8122
.0080	.8203	.8187	.8171	.8154	.8136	.8118	.8100	.8080	.8060	.8040	.8018
.0090	.8116	.8099	.8082	.8065	.8046	.8027	.8008	.7988	.7967	.7945	.7923
.0100	.8035	.8018	.8000	.7982	.7963	.7944	.7923	.7902	.7881	.7858	.7835
.0200	.7446	.7424	.7402	.7379	.7355	.7331	.7306	.7280	.7253	.7225	.7196
.0300	.7058	.7034	.7009	.6983	.6957	.6930	.6902	.6873	.6843	.6812	.6780
.0400	.6768	.6742	.6716	.6688	.6660	.6631	.6601	.6570	.6537	.6505	.6470
.0500	.6538	.6510	.6483	.6454	.6424	.6393	.6362	.6329	.6295	.6261	.6225
.0600	.6348	.6319	.6290	.6260	.6229	.6198	.6165	.6131	.6096	.6060	.6023
.0700	.6186	.6157	.6127	.6096	.6065	.6032	.5998	.5963	.5928	.5891	.5852
.0800	.6047	.6017	.5986	.5955	.5922	.5889	.5855	.5819	.5782	.5745	.5706
.0900	.5925	.5894	.5863	.5831	.5798	.5764	.5729	.5693	.5655	.5617	.5577
.1000	.5817	.5786	.5754	.5721	.5688	.5653	.5618	.5581	.5543	.5505	.5464

TABLE 69. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9670	.9668	.9665	.9663	.9661	.9660	.9657	.9655	.9652	.9650	.9648	.9645
.0002	.9539	.9535	.9532	.9529	.9527	.9525	.9521	.9517	.9513	.9511	.9509	.9504
.0003	.9440	.9436	.9432	.9428	.9425	.9423	.9419	.9414	.9409	.9406	.9404	.9399
.0004	.9358	.9354	.9349	.9344	.9341	.9339	.9334	.9329	.9323	.9320	.9317	.9311
.0005	.9287	.9282	.9277	.9272	.9269	.9266	.9261	.9255	.9248	.9244	.9242	.9235
.0006	.9224	.9218	.9213	.9207	.9204	.9201	.9195	.9188	.9182	.9177	.9174	.9167
.0007	.9166	.9160	.9154	.9148	.9145	.9142	.9135	.9128	.9121	.9116	.9113	.9105
.0008	.9113	.9107	.9101	.9094	.9090	.9087	.9080	.9073	.9065	.9060	.9057	.9049
.0009	.9063	.9057	.9051	.9044	.9040	.9036	.9029	.9021	.9013	.9008	.9005	.8996
.0010	.9017	.9011	.9004	.8996	.8992	.8989	.8981	.8973	.8965	.8959	.8956	.8946
.0020	.8658	.8649	.8640	.8631	.8625	.8621	.8610	.8599	.8588	.8581	.8576	.8564
.0030	.8400	.8389	.8379	.8367	.8361	.8356	.8343	.8331	.8317	.8309	.8304	.8289
.0040	.8193	.8181	.8169	.8156	.8149	.8143	.8130	.8116	.8101	.8092	.8085	.8069
.0050	.8017	.8005	.7992	.7978	.7970	.7964	.7949	.7934	.7918	.7908	.7901	.7884
.0060	.7865	.7852	.7838	.7823	.7815	.7808	.7792	.7776	.7759	.7748	.7741	.7723
.0070	.7730	.7715	.7701	.7686	.7676	.7669	.7653	.7636	.7618	.7607	.7599	.7580
.0080	.7607	.7593	.7577	.7561	.7552	.7545	.7527	.7509	.7491	.7479	.7471	.7451
.0090	.7496	.7480	.7465	.7448	.7438	.7431	.7413	.7394	.7375	.7363	.7354	.7333
.0100	.7393	.7377	.7361	.7344	.7333	.7326	.7307	.7288	.7268	.7255	.7247	.7225
.0200	.6654	.6635	.6615	.6594	.6582	.6573	.6550	.6527	.6503	.6488	.6478	.6451
.0300	.6181	.6160	.6138	.6115	.6101	.6091	.6067	.6041	.6015	.5998	.5987	.5959
.0400	.5833	.5811	.5788	.5764	.5749	.5739	.5713	.5686	.5658	.5641	.5629	.5599
.0500	.5561	.5538	.5514	.5489	.5474	.5463	.5436	.5408	.5379	.5361	.5349	.5318
.0600	.5338	.5315	.5290	.5265	.5249	.5238	.5211	.5182	.5152	.5134	.5122	.5090
.0700	.5152	.5128	.5103	.5077	.5061	.5049	.5022	.4993	.4962	.4944	.4931	.4899
.0800	.4992	.4968	.4943	.4916	.4900	.4888	.4860	.4831	.4800	.4781	.4768	.4735
.0900	.4854	.4829	.4803	.4777	.4761	.4749	.4720	.4690	.4659	.4640	.4627	.4594
.1000	.4732	.4707	.4681	.4654	.4638	.4626	.4597	.4567	.4536	.4517	.4504	.4470

TABLE 69. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9642	.9638	.9635	.9631	.9627	.9623	.9619	.9615	.9611	.9606	.9601
.0002	.9500	.9495	.9490	.9485	.9480	.9474	.9469	.9463	.9457	.9450	.9444
.0003	.9393	.9387	.9381	.9375	.9369	.9362	.9355	.9348	.9341	.9333	.9325
.0004	.9305	.9298	.9291	.9284	.9277	.9270	.9262	.9254	.9245	.9237	.9228
.0005	.9228	.9221	.9213	.9205	.9197	.9189	.9181	.9172	.9162	.9153	.9143
.0006	.9160	.9152	.9143	.9135	.9126	.9117	.9108	.9098	.9088	.9078	.9067
.0007	.9097	.9089	.9080	.9071	.9062	.9052	.9042	.9032	.9021	.9010	.8999
.0008	.9040	.9031	.9022	.9012	.9002	.8992	.8982	.8971	.8959	.8948	.8935
.0009	.8987	.8977	.8968	.8958	.8947	.8937	.8925	.8914	.8902	.8890	.8877
.0010	.8937	.8927	.8917	.8906	.8896	.8884	.8873	.8861	.8848	.8835	.8822
.0020	.8551	.8538	.8525	.8511	.8496	.8481	.8466	.8450	.8433	.8416	.8398
.0030	.8274	.8259	.8243	.8227	.8210	.8192	.8174	.8156	.8136	.8116	.8095
.0040	.8053	.8036	.8018	.8000	.7981	.7962	.7942	.7921	.7899	.7877	.7854
.0050	.7866	.7848	.7828	.7809	.7788	.7768	.7746	.7723	.7700	.7676	.7651
.0060	.7704	.7684	.7664	.7643	.7621	.7599	.7576	.7552	.7527	.7502	.7475
.0070	.7560	.7539	.7518	.7496	.7473	.7449	.7425	.7400	.7374	.7348	.7319
.0080	.7430	.7408	.7386	.7363	.7339	.7315	.7290	.7263	.7236	.7209	.7179
.0090	.7312	.7289	.7266	.7242	.7218	.7192	.7166	.7139	.7111	.7082	.7052
.0100	.7203	.7180	.7156	.7131	.7106	.7080	.7053	.7025	.6996	.6966	.6935
.0200	.6425	.6397	.6368	.6338	.6308	.6277	.6245	.6211	.6177	.6142	.6105
.0300	.5929	.5899	.5868	.5836	.5803	.5769	.5734	.5697	.5660	.5622	.5582
.0400	.5568	.5536	.5503	.5470	.5435	.5399	.5363	.5325	.5286	.5246	.5204
.0500	.5286	.5253	.5219	.5185	.5149	.5112	.5074	.5035	.4995	.4954	.4911
.0600	.5057	.5023	.4989	.4953	.4917	.4879	.4841	.4801	.4760	.4718	.4674
.0700	.4866	.4831	.4796	.4760	.4723	.4685	.4646	.4605	.4564	.4521	.4477
.0800	.4702	.4667	.4632	.4595	.4558	.4519	.4480	.4439	.4397	.4354	.4310
.0900	.4561	.4525	.4489	.4453	.4415	.4376	.4336	.4295	.4253	.4210	.4165
.1000	.4436	.4401	.4365	.4328	.4290	.4251	.4211	.4169	.4127	.4084	.4039

TABLE 70. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*
(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9562	.9559	.9556	.9553	.9551	.9549	.9546	.9542	.9538	.9536	.9534	.9530
.0002	.9390	.9385	.9381	.9376	.9374	.9372	.9367	.9362	.9356	.9353	.9351	.9345
.0003	.9260	.9255	.9250	.9245	.9241	.9239	.9233	.9227	.9220	.9216	.9213	.9206
.0004	.9153	.9148	.9142	.9136	.9132	.9129	.9122	.9115	.9108	.9103	.9100	.9092
.0005	.9061	.9055	.9048	.9041	.9037	.9034	.9026	.9019	.9011	.9005	.9002	.8993
.0006	.8978	.8972	.8965	.8957	.8953	.8949	.8941	.8933	.8924	.8918	.8915	.8905
.0007	.8904	.8896	.8889	.8881	.8876	.8872	.8864	.8855	.8845	.8840	.8836	.8825
.0008	.8835	.8827	.8819	.8811	.8806	.8802	.8793	.8783	.8773	.8767	.8763	.8752
.0009	.8771	.8763	.8755	.8746	.8740	.8736	.8727	.8717	.8706	.8700	.8695	.8684
.0010	.8711	.8703	.8694	.8685	.8679	.8675	.8665	.8655	.8644	.8637	.8632	.8621
.0020	.8252	.8241	.8229	.8217	.8210	.8204	.8191	.8178	.8163	.8154	.8148	.8133
.0030	.7926	.7912	.7899	.7885	.7876	.7870	.7855	.7839	.7822	.7812	.7805	.7787
.0040	.7666	.7651	.7636	.7621	.7611	.7604	.7587	.7570	.7551	.7540	.7532	.7512
.0050	.7448	.7433	.7417	.7400	.7390	.7382	.7364	.7345	.7325	.7313	.7305	.7283
.0060	.7260	.7243	.7227	.7209	.7198	.7190	.7171	.7151	.7130	.7117	.7108	.7085
.0070	.7094	.7076	.7059	.7040	.7029	.7020	.7000	.6979	.6957	.6944	.6935	.6911
.0080	.6945	.6927	.6908	.6889	.6877	.6868	.6847	.6826	.6803	.6789	.6779	.6755
.0090	.6809	.6790	.6771	.6751	.6739	.6730	.6709	.6686	.6663	.6648	.6638	.6613
.0100	.6685	.6666	.6646	.6626	.6613	.6604	.6582	.6559	.6534	.6520	.6509	.6483
.0200	.5809	.5787	.5764	.5740	.5725	.5715	.5689	.5662	.5634	.5616	.5605	.5574
.0300	.5265	.5241	.5216	.5190	.5175	.5163	.5136	.5107	.5077	.5059	.5046	.5014
.0400	.4874	.4849	.4824	.4797	.4781	.4769	.4740	.4711	.4680	.4661	.4648	.4615
.0500	.4573	.4547	.4521	.4494	.4478	.4466	.4437	.4406	.4375	.4355	.4342	.4309
.0600	.4331	.4305	.4279	.4251	.4234	.4222	.4193	.4162	.4131	.4111	.4098	.4064
.0700	.4130	.4104	.4078	.4050	.4033	.4021	.3991	.3961	.3929	.3909	.3896	.3862
.0800	.3960	.3934	.3908	.3880	.3863	.3851	.3821	.3790	.3758	.3739	.3725	.3691
.0900	.3815	.3788	.3762	.3734	.3717	.3705	.3675	.3644	.3612	.3593	.3579	.3545
.1000	.3687	.3661	.3635	.3607	.3590	.3578	.3548	.3517	.3485	.3465	.3452	.3418

TABLE 70. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9525	.9521	.9516	.9511	.9506	.9501	.9496	.9490	.9484	.9478	.9472
.0002	.9339	.9332	.9326	.9319	.9312	.9305	.9298	.9290	.9282	.9274	.9265
.0003	.9199	.9192	.9184	.9176	.9167	.9159	.9150	.9141	.9131	.9121	.9111
.0004	.9084	.9075	.9066	.9057	.9048	.9038	.9028	.9017	.9007	.8995	.8984
.0005	.8984	.8975	.8965	.8955	.8944	.8934	.8923	.8911	.8899	.8887	.8874
.0006	.8895	.8885	.8875	.8864	.8852	.8841	.8829	.8816	.8803	.8790	.8776
.0007	.8815	.8804	.8793	.8781	.8769	.8757	.8744	.8730	.8717	.8702	.8688
.0008	.8741	.8729	.8718	.8705	.8693	.8679	.8666	.8652	.8637	.8622	.8606
.0009	.8673	.8660	.8648	.8635	.8622	.8608	.8594	.8579	.8563	.8548	.8531
.0010	.8608	.8596	.8583	.8569	.8555	.8541	.8526	.8511	.8495	.8478	.8461
.0020	.8117	.8100	.8083	.8065	.8047	.8028	.8009	.7988	.7968	.7946	.7924
.0030	.7768	.7749	.7729	.7709	.7687	.7666	.7643	.7620	.7596	.7571	.7545
.0040	.7492	.7471	.7449	.7426	.7403	.7379	.7355	.7329	.7302	.7275	.7246
.0050	.7261	.7238	.7215	.7191	.7166	.7140	.7114	.7086	.7058	.7029	.6998
.0060	.7062	.7038	.7013	.6988	.6961	.6934	.6906	.6877	.6847	.6817	.6784
.0070	.6887	.6861	.6836	.6809	.6781	.6753	.6724	.6693	.6662	.6630	.6596
.0080	.6730	.6703	.6676	.6649	.6620	.6591	.6561	.6529	.6497	.6464	.6429
.0090	.6587	.6560	.6532	.6504	.6474	.6444	.6413	.6380	.6347	.6313	.6277
.0100	.6457	.6429	.6400	.6371	.6341	.6310	.6278	.6245	.6210	.6176	.6139
.0200	.5544	.5511	.5479	.5445	.5410	.5374	.5338	.5299	.5260	.5220	.5179
.0300	.4981	.4947	.4912	.4877	.4840	.4802	.4763	.4723	.4682	.4640	.4596
.0400	.4581	.4546	.4510	.4473	.4435	.4397	.4357	.4316	.4274	.4231	.4186
.0500	.4274	.4239	.4202	.4165	.4127	.4088	.4047	.4006	.3963	.3920	.3875
.0600	.4029	.3993	.3956	.3919	.3880	.3841	.3801	.3759	.3716	.3673	.3628
.0700	.3827	.3791	.3754	.3716	.3678	.3638	.3598	.3556	.3514	.3470	.3425
.0800	.3656	.3620	.3584	.3546	.3507	.3468	.3428	.3386	.3344	.3300	.3255
.0900	.3510	.3474	.3438	.3400	.3362	.3322	.3282	.3241	.3198	.3155	.3111
.1000	.3383	.3347	.3311	.3273	.3235	.3196	.3156	.3115	.3073	.3030	.2985

TABLE 71. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9351	.9346	.9342	.9337	.9334	.9332	.9326	.9321	.9315	.9312	.9309	.9303
.0002	.9098	.9092	.9086	.9079	.9075	.9072	.9065	.9058	.9050	.9045	.9042	.9033
.0003	.8911	.8904	.8896	.8888	.8884	.8880	.8872	.8863	.8853	.8848	.8844	.8833
.0004	.8757	.8749	.8741	.8732	.8726	.8722	.8713	.8703	.8692	.8685	.8681	.8670
.0005	.8625	.8616	.8607	.8597	.8591	.8586	.8576	.8565	.8553	.8546	.8541	.8528
.0006	.8508	.8498	.8488	.8477	.8471	.8466	.8455	.8443	.8430	.8422	.8417	.8404
.0007	.8401	.8391	.8380	.8369	.8362	.8357	.8345	.8332	.8319	.8311	.8305	.8291
.0008	.8304	.8293	.8282	.8270	.8263	.8258	.8245	.8232	.8218	.8209	.8203	.8188
.0009	.8215	.8203	.8191	.8179	.8171	.8166	.8152	.8138	.8124	.8115	.8109	.8093
.0010	.8131	.8119	.8107	.8094	.8086	.8080	.8066	.8052	.8036	.8027	.8020	.8004
.0020	.7497	.7481	.7466	.7449	.7439	.7431	.7414	.7395	.7376	.7363	.7355	.7334
.0030	.7056	.7038	.7020	.7001	.6990	.6982	.6961	.6940	.6918	.6904	.6895	.6871
.0040	.6712	.6693	.6673	.6653	.6640	.6631	.6609	.6586	.6562	.6547	.6537	.6511
.0050	.6428	.6408	.6387	.6365	.6352	.6343	.6319	.6295	.6269	.6254	.6243	.6216
.0060	.6186	.6165	.6143	.6120	.6107	.6097	.6072	.6047	.6020	.6004	.5993	.5964
.0070	.5975	.5953	.5930	.5907	.5893	.5882	.5857	.5831	.5803	.5786	.5775	.5745
.0080	.5787	.5765	.5742	.5717	.5703	.5692	.5666	.5639	.5611	.5593	.5582	.5551
.0090	.5619	.5596	.5572	.5547	.5532	.5521	.5495	.5467	.5438	.5421	.5409	.5378
.0100	.5466	.5442	.5418	.5393	.5378	.5367	.5340	.5312	.5282	.5264	.5252	.5220
.0200	.4428	.4402	.4376	.4349	.4332	.4320	.4291	.4260	.4229	.4209	.4196	.4162
.0300	.3820	.3794	.3767	.3739	.3723	.3710	.3681	.3650	.3618	.3598	.3585	.3550
.0400	.3403	.3377	.3350	.3322	.3306	.3293	.3264	.3233	.3201	.3182	.3169	.3135
.0500	.3092	.3066	.3040	.3013	.2996	.2984	.2955	.2925	.2894	.2874	.2861	.2828
.0600	.2850	.2825	.2799	.2772	.2755	.2744	.2715	.2685	.2655	.2636	.2623	.2590
.0700	.2654	.2629	.2604	.2577	.2561	.2550	.2522	.2493	.2463	.2444	.2432	.2400
.0800	.2492	.2468	.2443	.2417	.2401	.2390	.2362	.2334	.2304	.2286	.2274	.2242
.0900	.2356	.2332	.2307	.2282	.2266	.2255	.2228	.2200	.2171	.2153	.2141	.2111
.1000	.2239	.2215	.2191	.2166	.2151	.2140	.2113	.2086	.2057	.2040	.2028	.1998

TABLE 71. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9297	.9290	.9283	.9276	.9269	.9261	.9253	.9245	.9237	.9228	.9219
.0002	.9025	.9015	.9006	.8996	.8986	.8976	.8965	.8954	.8943	.8931	.8918
.0003	.8823	.8812	.8801	.8789	.8778	.8765	.8752	.8739	.8725	.8711	.8696
.0004	.8658	.8645	.8633	.8620	.8606	.8592	.8578	.8563	.8548	.8532	.8515
.0005	.8516	.8502	.8488	.8474	.8459	.8444	.8428	.8412	.8395	.8377	.8359
.0006	.8390	.8375	.8360	.8345	.8329	.8313	.8296	.8278	.8260	.8241	.8221
.0007	.8276	.8261	.8245	.8229	.8212	.8194	.8176	.8158	.8138	.8118	.8097
.0008	.8172	.8156	.8139	.8122	.8104	.8086	.8067	.8047	.8027	.8006	.7984
.0009	.8076	.8059	.8042	.8024	.8005	.7986	.7966	.7946	.7925	.7903	.7880
.0010	.7987	.7969	.7951	.7933	.7913	.7893	.7873	.7851	.7829	.7806	.7782
.0020	.7313	.7290	.7267	.7243	.7219	.7193	.7167	.7140	.7112	.7083	.7053
.0030	.6847	.6821	.6795	.6768	.6740	.6712	.6682	.6651	.6620	.6588	.6554
.0040	.6485	.6457	.6429	.6400	.6370	.6339	.6307	.6274	.6240	.6205	.6169
.0050	.6188	.6158	.6129	.6098	.6066	.6033	.6000	.5965	.5929	.5893	.5854
.0060	.5935	.5904	.5873	.5841	.5808	.5774	.5739	.5703	.5666	.5628	.5588
.0070	.5715	.5683	.5651	.5618	.5584	.5549	.5513	.5476	.5438	.5399	.5357
.0080	.5521	.5488	.5455	.5421	.5387	.5351	.5314	.5276	.5236	.5196	.5154
.0090	.5346	.5313	.5280	.5245	.5209	.5173	.5136	.5097	.5057	.5016	.4973
.0100	.5188	.5155	.5121	.5085	.5049	.5012	.4974	.4935	.4894	.4853	.4810
.0200	.4128	.4092	.4055	.4018	.3979	.3940	.3900	.3858	.3815	.3772	.3727
.0300	.3516	.3480	.3443	.3406	.3367	.3328	.3288	.3246	.3204	.3161	.3116
.0400	.3101	.3065	.3029	.2992	.2954	.2915	.2876	.2835	.2794	.2752	.2708
.0500	.2795	.2759	.2724	.2688	.2651	.2613	.2575	.2535	.2495	.2454	.2412
.0600	.2558	.2523	.2489	.2453	.2417	.2381	.2343	.2305	.2266	.2226	.2185
.0700	.2367	.2334	.2300	.2266	.2230	.2195	.2158	.2121	.2083	.2044	.2005
.0800	.2211	.2178	.2145	.2112	.2077	.2042	.2007	.1970	.1933	.1896	.1857
.0900	.2080	.2048	.2015	.1983	.1949	.1915	.1880	.1845	.1809	.1772	.1735
.1000	.1968	.1937	.1905	.1873	.1840	.1807	.1773	.1738	.1703	.1668	.1631

TABLE 72. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9144	.9138	.9132	.9126	.9122	.9119	.9112	.9105	.9098	.9093	.9090	.9082
.0002	.8816	.8809	.8800	.8792	.8787	.8783	.8774	.8764	.8754	.8748	.8743	.8732
.0003	.8575	.8566	.8556	.8546	.8540	.8535	.8525	.8513	.8501	.8494	.8489	.8476
.0004	.8379	.8368	.8357	.8346	.8339	.8334	.8321	.8309	.8295	.8287	.8281	.8267
.0005	.8210	.8198	.8187	.8174	.8167	.8161	.8148	.8134	.8119	.8110	.8104	.8088
.0006	.8061	.8049	.8036	.8023	.8015	.8009	.7994	.7979	.7964	.7954	.7947	.7930
.0007	.7928	.7914	.7901	.7887	.7878	.7872	.7857	.7841	.7824	.7814	.7807	.7789
.0008	.7806	.7792	.7778	.7763	.7754	.7747	.7731	.7715	.7697	.7686	.7679	.7660
.0009	.7693	.7679	.7664	.7649	.7639	.7632	.7616	.7598	.7580	.7569	.7561	.7541
.0010	.7589	.7574	.7559	.7543	.7533	.7526	.7509	.7490	.7472	.7460	.7452	.7431
.0020	.6810	.6792	.6772	.6752	.6740	.6731	.6710	.6687	.6664	.6649	.6639	.6614
.0030	.6281	.6261	.6239	.6217	.6203	.6194	.6170	.6145	.6118	.6102	.6091	.6063
.0040	.5876	.5854	.5832	.5808	.5793	.5783	.5757	.5730	.5702	.5685	.5674	.5644
.0050	.5548	.5524	.5501	.5476	.5461	.5449	.5423	.5395	.5366	.5348	.5336	.5304
.0060	.5271	.5247	.5222	.5196	.5181	.5169	.5142	.5113	.5083	.5065	.5052	.5020
.0070	.5032	.5008	.4982	.4956	.4940	.4928	.4900	.4871	.4840	.4822	.4809	.4776
.0080	.4823	.4798	.4772	.4745	.4729	.4717	.4689	.4659	.4628	.4609	.4596	.4562
.0090	.4636	.4611	.4585	.4558	.4542	.4530	.4501	.4471	.4439	.4420	.4407	.4373
.0100	.4469	.4443	.4417	.4390	.4373	.4361	.4332	.4302	.4270	.4250	.4237	.4203
.0200	.3375	.3349	.3322	.3295	.3278	.3266	.3236	.3206	.3174	.3154	.3141	.3107
.0300	.2772	.2747	.2721	.2694	.2678	.2666	.2638	.2608	.2578	.2559	.2546	.2514
.0400	.2375	.2351	.2327	.2301	.2286	.2274	.2247	.2219	.2190	.2172	.2160	.2129
.0500	.2091	.2068	.2044	.2020	.2005	.1994	.1968	.1942	.1914	.1897	.1886	.1856
.0600	.1875	.1853	.1831	.1807	.1793	.1783	.1758	.1732	.1706	.1690	.1679	.1651
.0700	.1706	.1684	.1663	.1640	.1627	.1617	.1593	.1569	.1544	.1528	.1518	.1491
.0800	.1569	.1548	.1527	.1505	.1492	.1483	.1460	.1437	.1413	.1398	.1388	.1362
.0900	.1455	.1435	.1415	.1394	.1382	.1373	.1351	.1328	.1305	.1291	.1281	.1257
.1000	.1360	.1341	.1321	.1301	.1289	.1280	.1259	.1237	.1215	.1201	.1192	.1168

TABLE 72. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9073	.9065	.9056	.9047	.9037	.9027	.9017	.9006	.8995	.8984	.8972
.0002	.8721	.8709	.8697	.8685	.8672	.8659	.8645	.8631	.8616	.8601	.8584
.0003	.8462	.8448	.8434	.8419	.8404	.8388	.8372	.8355	.8338	.8320	.8301
.0004	.8252	.8236	.8220	.8204	.8186	.8169	.8151	.8132	.8112	.8092	.8071
.0005	.8072	.8054	.8037	.8019	.8000	.7981	.7961	.7941	.7919	.7897	.7874
.0006	.7913	.7895	.7876	.7857	.7837	.7816	.7795	.7773	.7750	.7726	.7702
.0007	.7770	.7751	.7731	.7711	.7690	.7668	.7646	.7622	.7598	.7573	.7547
.0008	.7641	.7620	.7600	.7578	.7556	.7533	.7510	.7485	.7460	.7434	.7407
.0009	.7521	.7500	.7479	.7456	.7433	.7409	.7385	.7359	.7333	.7306	.7278
.0010	.7411	.7389	.7366	.7343	.7319	.7295	.7269	.7243	.7216	.7188	.7159
.0020	.6588	.6561	.6533	.6505	.6475	.6445	.6414	.6382	.6348	.6314	.6278
.0030	.6035	.6004	.5974	.5942	.5910	.5876	.5842	.5806	.5770	.5732	.5693
.0040	.5613	.5581	.5549	.5515	.5481	.5445	.5409	.5371	.5332	.5293	.5251
.0050	.5273	.5239	.5206	.5171	.5135	.5098	.5061	.5021	.4981	.4940	.4897
.0060	.4988	.4953	.4919	.4883	.4846	.4808	.4770	.4730	.4688	.4647	.4603
.0070	.4743	.4708	.4672	.4636	.4599	.4560	.4521	.4480	.4438	.4396	.4351
.0080	.4529	.4493	.4457	.4421	.4383	.4344	.4304	.4263	.4221	.4178	.4133
.0090	.4339	.4303	.4267	.4230	.4192	.4153	.4113	.4071	.4029	.3985	.3940
.0100	.4169	.4133	.4097	.4059	.4021	.3982	.3941	.3900	.3857	.3814	.3768
.0200	.3073	.3037	.3001	.2965	.2927	.2888	.2849	.2808	.2767	.2725	.2682
.0300	.2481	.2447	.2413	.2378	.2342	.2306	.2269	.2231	.2192	.2153	.2113
.0400	.2099	.2066	.2034	.2001	.1967	.1933	.1898	.1863	.1827	.1790	.1752
.0500	.1827	.1797	.1766	.1735	.1703	.1671	.1638	.1605	.1571	.1537	.1501
.0600	.1623	.1594	.1565	.1536	.1506	.1475	.1445	.1413	.1381	.1349	.1316
.0700	.1465	.1437	.1409	.1381	.1353	.1324	.1295	.1265	.1235	.1204	.1173
.0800	.1337	.1311	.1284	.1257	.1230	.1203	.1175	.1147	.1118	.1089	.1060
.0900	.1232	.1207	.1182	.1156	.1130	.1104	.1077	.1050	.1023	.0996	.0968
.1000	.1145	.1120	.1096	.1072	.1047	.1021	.0996	.0970	.0944	.0918	.0891

TABLE 73. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9042	.9036	.9029	.9022	.9018	.9014	.9007	.8999	.8991	.8986	.8982	.8973
.0002	.8679	.8670	.8661	.8651	.8646	.8642	.8631	.8621	.8609	.8602	.8598	.8586
.0003	.8412	.8402	.8391	.8380	.8373	.8368	.8356	.8344	.8330	.8322	.8317	.8302
.0004	.8195	.8184	.8172	.8159	.8152	.8146	.8133	.8118	.8104	.8094	.8088	.8072
.0005	.8010	.7997	.7984	.7971	.7962	.7956	.7942	.7926	.7910	.7900	.7893	.7876
.0006	.7847	.7833	.7820	.7805	.7796	.7790	.7774	.7757	.7740	.7730	.7722	.7704
.0007	.7701	.7686	.7672	.7656	.7647	.7640	.7623	.7606	.7588	.7577	.7569	.7549
.0008	.7568	.7553	.7537	.7521	.7511	.7504	.7487	.7468	.7449	.7438	.7430	.7409
.0009	.7445	.7430	.7414	.7397	.7387	.7379	.7361	.7342	.7322	.7310	.7301	.7280
.0010	.7332	.7316	.7299	.7281	.7271	.7263	.7244	.7225	.7204	.7192	.7183	.7161
.0020	.6491	.6471	.6450	.6429	.6416	.6406	.6383	.6359	.6334	.6319	.6308	.6281
.0030	.5927	.5905	.5882	.5858	.5844	.5833	.5808	.5782	.5754	.5737	.5725	.5696
.0040	.5499	.5475	.5451	.5426	.5411	.5400	.5373	.5345	.5316	.5298	.5286	.5254
.0050	.5154	.5129	.5105	.5079	.5063	.5051	.5023	.4994	.4964	.4945	.4933	.4900
.0060	.4865	.4840	.4815	.4788	.4772	.4760	.4732	.4702	.4671	.4652	.4639	.4606
.0070	.4618	.4593	.4567	.4540	.4523	.4511	.4482	.4452	.4421	.4401	.4388	.4355
.0080	.4402	.4377	.4351	.4323	.4307	.4294	.4265	.4235	.4203	.4183	.4170	.4136
.0090	.4212	.4186	.4159	.4132	.4115	.4103	.4073	.4043	.4011	.3991	.3978	.3944
.0100	.4041	.4015	.3988	.3960	.3944	.3931	.3902	.3871	.3839	.3819	.3806	.3772
.0200	.2946	.2921	.2895	.2868	.2851	.2839	.2811	.2781	.2750	.2731	.2718	.2685
.0300	.2361	.2337	.2312	.2287	.2271	.2260	.2233	.2205	.2176	.2158	.2146	.2116
.0400	.1985	.1962	.1939	.1915	.1900	.1890	.1865	.1838	.1811	.1795	.1784	.1755
.0500	.1719	.1698	.1676	.1654	.1640	.1630	.1606	.1582	.1557	.1541	.1531	.1504
.0600	.1521	.1501	.1481	.1459	.1446	.1437	.1415	.1392	.1368	.1353	.1343	.1318
.0700	.1367	.1348	.1329	.1308	.1296	.1287	.1266	.1244	.1222	.1208	.1199	.1175
.0800	.1244	.1226	.1207	.1188	.1177	.1168	.1148	.1127	.1106	.1093	.1084	.1062
.0900	.1144	.1126	.1108	.1090	.1079	.1071	.1052	.1032	.1012	.0999	.0991	.0970
.1000	.1060	.1043	.1026	.1008	.0998	.0990	.0972	.0953	.0933	.0921	.0913	.0893

TABLE 73. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8964	.8954	.8944	.8934	.8923	.8912	.8901	.8889	.8877	.8865	.8851
.0002	.8573	.8560	.8547	.8533	.8519	.8504	.8489	.8473	.8457	.8440	.8422
.0003	.8288	.8272	.8257	.8240	.8224	.8206	.8188	.8170	.8150	.8131	.8110
.0004	.8056	.8039	.8021	.8003	.7984	.7965	.7945	.7924	.7903	.7880	.7857
.0005	.7858	.7839	.7820	.7801	.7780	.7759	.7738	.7715	.7692	.7668	.7643
.0006	.7685	.7665	.7644	.7623	.7601	.7579	.7556	.7532	.7507	.7481	.7454
.0007	.7529	.7508	.7487	.7464	.7441	.7418	.7393	.7368	.7342	.7315	.7286
.0008	.7388	.7366	.7343	.7320	.7296	.7271	.7246	.7219	.7192	.7164	.7134
.0009	.7258	.7235	.7212	.7188	.7163	.7137	.7110	.7083	.7054	.7025	.6995
.0010	.7138	.7114	.7090	.7065	.7039	.7013	.6985	.6957	.6927	.6897	.6866
.0020	.6253	.6224	.6195	.6164	.6133	.6101	.6068	.6033	.5998	.5961	.5923
.0030	.5665	.5633	.5601	.5568	.5534	.5498	.5462	.5425	.5386	.5347	.5305
.0040	.5222	.5189	.5155	.5120	.5084	.5047	.5009	.4970	.4929	.4888	.4845
.0050	.4867	.4833	.4798	.4762	.4725	.4686	.4647	.4607	.4566	.4523	.4479
.0060	.4572	.4537	.4501	.4464	.4427	.4388	.4348	.4307	.4265	.4222	.4177
.0070	.4321	.4285	.4249	.4211	.4173	.4134	.4094	.4052	.4010	.3967	.3921
.0080	.4102	.4066	.4029	.3992	.3953	.3914	.3874	.3832	.3789	.3746	.3701
.0090	.3909	.3873	.3836	.3799	.3760	.3721	.3680	.3638	.3596	.3552	.3507
.0100	.3737	.3701	.3664	.3627	.3588	.3549	.3508	.3467	.3424	.3381	.3336
.0200	.2652	.2617	.2582	.2547	.2510	.2473	.2435	.2396	.2357	.2317	.2275
.0300	.2085	.2053	.2020	.1987	.1954	.1920	.1885	.1849	.1813	.1777	.1739
.0400	.1726	.1697	.1667	.1636	.1605	.1574	.1542	.1510	.1477	.1444	.1409
.0500	.1477	.1450	.1422	.1394	.1365	.1336	.1307	.1277	.1246	.1216	.1185
.0600	.1293	.1267	.1242	.1215	.1188	.1161	.1134	.1106	.1078	.1050	.1021
.0700	.1152	.1127	.1103	.1078	.1053	.1028	.1003	.0977	.0951	.0924	.0897
.0800	.1040	.1017	.0994	.0970	.0947	.0923	.0899	.0875	.0850	.0826	.0800
.0900	.0949	.0927	.0905	.0883	.0860	.0838	.0815	.0792	.0769	.0746	.0723
.1000	.0873	.0852	.0831	.0811	.0789	.0768	.0747	.0725	.0703	.0681	.0659

TABLE 74. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8744	.8735	.8727	.8718	.8712	.8708	.8698	.8688	.8677	.8671	.8666	.8655
.0002	.8278	.8267	.8256	.8244	.8236	.8231	.8218	.8204	.8190	.8181	.8176	.8160
.0003	.7941	.7928	.7915	.7901	.7892	.7886	.7871	.7855	.7838	.7828	.7821	.7803
.0004	.7669	.7655	.7640	.7624	.7615	.7608	.7591	.7573	.7555	.7544	.7536	.7516
.0005	.7439	.7423	.7407	.7390	.7380	.7373	.7354	.7335	.7316	.7303	.7295	.7273
.0006	.7238	.7221	.7204	.7186	.7175	.7167	.7148	.7128	.7107	.7094	.7085	.7062
.0007	.7058	.7041	.7023	.7004	.6993	.6984	.6964	.6943	.6921	.6907	.6898	.6874
.0008	.6896	.6878	.6859	.6840	.6828	.6819	.6798	.6776	.6753	.6739	.6729	.6704
.0009	.6748	.6729	.6710	.6689	.6677	.6668	.6646	.6623	.6600	.6585	.6575	.6549
.0010	.6611	.6592	.6572	.6551	.6538	.6529	.6506	.6483	.6458	.6443	.6433	.6406
.0020	.5620	.5597	.5573	.5549	.5534	.5523	.5496	.5469	.5440	.5422	.5410	.5379
.0030	.4978	.4954	.4928	.4902	.4886	.4874	.4846	.4816	.4786	.4767	.4754	.4721
.0040	.4505	.4479	.4453	.4426	.4409	.4397	.4368	.4338	.4306	.4287	.4274	.4240
.0050	.4132	.4106	.4080	.4052	.4035	.4023	.3993	.3963	.3931	.3911	.3898	.3863
.0060	.3827	.3801	.3774	.3746	.3729	.3717	.3687	.3656	.3624	.3605	.3591	.3557
.0070	.3570	.3544	.3517	.3489	.3472	.3460	.3430	.3400	.3368	.3348	.3335	.3301
.0080	.3349	.3323	.3297	.3269	.3252	.3240	.3210	.3180	.3148	.3129	.3116	.3082
.0090	.3157	.3131	.3105	.3077	.3061	.3049	.3019	.2989	.2958	.2938	.2925	.2892
.0100	.2987	.2962	.2936	.2908	.2892	.2880	.2851	.2821	.2790	.2771	.2758	.2725
.0200	.1961	.1938	.1915	.1891	.1877	.1866	.1841	.1815	.1788	.1772	.1761	.1732
.0300	.1459	.1439	.1419	.1398	.1386	.1377	.1355	.1332	.1309	.1295	.1285	.1261
.0400	.1158	.1140	.1122	.1104	.1093	.1085	.1065	.1045	.1025	.1012	.1004	.0983
.0500	.0956	.0940	.0924	.0908	.0898	.0891	.0873	.0856	.0837	.0826	.0819	.0800
.0600	.0812	.0798	.0783	.0768	.0759	.0753	.0737	.0721	.0705	.0695	.0688	.0671
.0700	.0705	.0691	.0678	.0664	.0656	.0650	.0636	.0621	.0606	.0597	.0591	.0576
.0800	.0621	.0609	.0597	.0584	.0577	.0571	.0558	.0545	.0531	.0523	.0517	.0503
.0900	.0555	.0544	.0532	.0521	.0514	.0508	.0496	.0484	.0471	.0464	.0459	.0445
.1000	.0501	.0491	.0480	.0469	.0463	.0458	.0447	.0435	.0423	.0416	.0411	.0399

TABLE 74. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8643	.8630	.8618	.8605	.8591	.8577	.8562	.8547	.8532	.8515	.8499
.0002	.8144	.8128	.8111	.8094	.8076	.8057	.8038	.8018	.7997	.7976	.7954
.0003	.7785	.7765	.7746	.7725	.7704	.7683	.7661	.7637	.7613	.7589	.7563
.0004	.7496	.7474	.7453	.7430	.7407	.7383	.7358	.7333	.7306	.7279	.7250
.0005	.7252	.7229	.7205	.7181	.7156	.7130	.7104	.7076	.7047	.7018	.6987
.0006	.7039	.7014	.6990	.6964	.6937	.6910	.6882	.6853	.6822	.6792	.6759
.0007	.6850	.6824	.6798	.6771	.6743	.6715	.6685	.6654	.6623	.6591	.6557
.0008	.6679	.6652	.6625	.6597	.6568	.6539	.6508	.6476	.6443	.6410	.6375
.0009	.6523	.6495	.6467	.6438	.6409	.6378	.6346	.6314	.6280	.6245	.6209
.0010	.6379	.6351	.6322	.6293	.6262	.6230	.6198	.6164	.6129	.6094	.6057
.0020	.5348	.5314	.5281	.5246	.5211	.5174	.5137	.5098	.5058	.5017	.4975
.0030	.4688	.4653	.4617	.4581	.4543	.4505	.4465	.4424	.4382	.4340	.4295
.0040	.4205	.4169	.4133	.4096	.4057	.4018	.3978	.3936	.3894	.3850	.3805
.0050	.3829	.3792	.3756	.3718	.3680	.3640	.3600	.3558	.3516	.3472	.3427
.0060	.3522	.3486	.3450	.3412	.3374	.3334	.3294	.3253	.3210	.3167	.3123
.0070	.3266	.3230	.3194	.3157	.3119	.3080	.3040	.2999	.2957	.2914	.2870
.0080	.3048	.3012	.2976	.2939	.2901	.2863	.2824	.2783	.2742	.2700	.2657
.0090	.2858	.2823	.2787	.2751	.2714	.2676	.2637	.2597	.2557	.2516	.2473
.0100	.2692	.2657	.2622	.2586	.2550	.2512	.2474	.2435	.2395	.2355	.2313
.0200	.1704	.1674	.1644	.1614	.1583	.1552	.1521	.1488	.1456	.1423	.1389
.0300	.1236	.1211	.1185	.1160	.1134	.1107	.1081	.1054	.1026	.0999	.0971
.0400	.0961	.0939	.0917	.0895	.0873	.0850	.0827	.0804	.0781	.0757	.0734
.0500	.0781	.0761	.0742	.0723	.0703	.0683	.0663	.0643	.0623	.0602	.0582
.0600	.0654	.0637	.0619	.0602	.0584	.0567	.0549	.0531	.0513	.0496	.0477
.0700	.0560	.0545	.0529	.0513	.0497	.0482	.0466	.0450	.0434	.0418	.0402
.0800	.0489	.0474	.0460	.0446	.0431	.0417	.0403	.0388	.0374	.0360	.0345
.0900	.0433	.0419	.0406	.0393	.0380	.0367	.0354	.0340	.0327	.0314	.0301
.1000	.0387	.0375	.0363	.0351	.0339	.0326	.0314	.0302	.0290	.0278	.0266

TABLE 75. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Davies*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8361	.8350	.8339	.8328	.8321	.8316	.8303	.8290	.8277	.8268	.8262	.8248
.0002	.7773	.7759	.7745	.7730	.7721	.7714	.7698	.7681	.7663	.7652	.7645	.7625
.0003	.7354	.7338	.7321	.7304	.7293	.7285	.7267	.7247	.7227	.7214	.7206	.7184
.0004	.7020	.7002	.6984	.6965	.6954	.6945	.6925	.6903	.6881	.6867	.6858	.6834
.0005	.6740	.6721	.6702	.6682	.6669	.6660	.6638	.6616	.6592	.6577	.6567	.6541
.0006	.6498	.6479	.6458	.6437	.6424	.6414	.6391	.6367	.6342	.6326	.6316	.6289
.0007	.6285	.6264	.6243	.6220	.6207	.6197	.6173	.6148	.6122	.6106	.6095	.6067
.0008	.6093	.6071	.6049	.6026	.6012	.6002	.5977	.5951	.5925	.5908	.5897	.5868
.0009	.5919	.5897	.5874	.5850	.5836	.5825	.5800	.5773	.5746	.5729	.5717	.5687
.0010	.5759	.5737	.5714	.5689	.5675	.5664	.5638	.5611	.5582	.5565	.5553	.5523
.0020	.4638	.4612	.4587	.4559	.4543	.4531	.4502	.4472	.4441	.4421	.4408	.4375
.0030	.3946	.3920	.3893	.3865	.3848	.3836	.3806	.3776	.3744	.3724	.3710	.3676
.0040	.3453	.3427	.3401	.3373	.3356	.3344	.3314	.3284	.3252	.3232	.3219	.3185
.0050	.3078	.3052	.3026	.2998	.2982	.2970	.2941	.2910	.2879	.2860	.2847	.2814
.0060	.2778	.2753	.2727	.2700	.2684	.2672	.2644	.2615	.2584	.2565	.2553	.2520
.0070	.2532	.2508	.2482	.2456	.2441	.2429	.2401	.2373	.2343	.2325	.2312	.2281
.0080	.2326	.2302	.2277	.2252	.2236	.2225	.2198	.2170	.2142	.2124	.2112	.2082
.0090	.2150	.2126	.2102	.2078	.2063	.2052	.2026	.1999	.1971	.1953	.1942	.1912
.0100	.1997	.1974	.1951	.1927	.1913	.1902	.1877	.1850	.1823	.1807	.1795	.1767
.0200	.1139	.1122	.1104	.1085	.1075	.1066	.1047	.1028	.1007	.0995	.0987	.0966
.0300	.0768	.0754	.0740	.0726	.0717	.0711	.0696	.0680	.0665	.0655	.0648	.0632
.0400	.0564	.0553	.0541	.0529	.0522	.0517	.0505	.0492	.0480	.0472	.0467	.0453
.0500	.0437	.0428	.0418	.0408	.0402	.0398	.0387	.0377	.0366	.0360	.0356	.0345
.0600	.0352	.0343	.0335	.0327	.0322	.0318	.0309	.0300	.0291	.0286	.0282	.0273
.0700	.0291	.0284	.0276	.0269	.0265	.0261	.0254	.0246	.0238	.0233	.0230	.0222
.0800	.0246	.0240	.0233	.0227	.0223	.0220	.0213	.0206	.0200	.0195	.0193	.0186
.0900	.0212	.0206	.0200	.0194	.0191	.0188	.0182	.0176	.0170	.0167	.0164	.0158
.1000	.0185	.0180	.0175	.0169	.0166	.0164	.0158	.0153	.0148	.0144	.0142	.0136

TABLE 75. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Davies* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8233	.8217	.8201	.8184	.8167	.8149	.8131	.8111	.8092	.8071	.8050
.0002	.7606	.7585	.7564	.7543	.7520	.7497	.7473	.7449	.7423	.7397	.7369
.0003	.7161	.7138	.7114	.7089	.7063	.7037	.7009	.6981	.6952	.6922	.6890
.0004	.6809	.6783	.6757	.6730	.6702	.6673	.6643	.6612	.6580	.6548	.6513
.0005	.6515	.6487	.6459	.6430	.6401	.6370	.6338	.6305	.6271	.6237	.6200
.0006	.6261	.6232	.6203	.6173	.6141	.6109	.6076	.6041	.6006	.5970	.5932
.0007	.6038	.6008	.5977	.5946	.5913	.5880	.5845	.5810	.5773	.5736	.5696
.0008	.5838	.5807	.5775	.5743	.5709	.5675	.5640	.5603	.5565	.5527	.5486
.0009	.5657	.5625	.5593	.5560	.5525	.5490	.5454	.5416	.5378	.5338	.5297
.0010	.5492	.5459	.5426	.5392	.5357	.5321	.5284	.5246	.5207	.5167	.5124
.0020	.4340	.4305	.4269	.4231	.4193	.4154	.4114	.4072	.4030	.3987	.3942
.0030	.3642	.3605	.3569	.3531	.3493	.3453	.3413	.3371	.3329	.3286	.3241
.0040	.3151	.3115	.3079	.3042	.3004	.2965	.2926	.2885	.2843	.2801	.2757
.0050	.2780	.2745	.2710	.2674	.2637	.2599	.2561	.2521	.2481	.2440	.2398
.0060	.2488	.2454	.2419	.2384	.2349	.2312	.2275	.2237	.2198	.2159	.2118
.0070	.2249	.2216	.2183	.2149	.2115	.2080	.2044	.2007	.1970	.1932	.1893
.0080	.2051	.2019	.1987	.1954	.1921	.1887	.1853	.1817	.1781	.1745	.1708
.0090	.1883	.1852	.1821	.1789	.1757	.1724	.1691	.1657	.1623	.1588	.1552
.0100	.1738	.1708	.1678	.1648	.1617	.1585	.1553	.1521	.1488	.1454	.1420
.0200	.0944	.0923	.0901	.0879	.0857	.0834	.0812	.0789	.0766	.0743	.0719
.0300	.0616	.0599	.0582	.0566	.0549	.0532	.0515	.0498	.0481	.0464	.0446
.0400	.0440	.0427	.0414	.0400	.0387	.0374	.0360	.0347	.0334	.0320	.0307
.0500	.0334	.0323	.0312	.0301	.0290	.0279	.0268	.0257	.0247	.0236	.0225
.0600	.0264	.0254	.0245	.0236	.0227	.0218	.0209	.0200	.0191	.0182	.0173
.0700	.0214	.0206	.0199	.0191	.0183	.0175	.0168	.0160	.0152	.0145	.0138
.0800	.0179	.0172	.0165	.0158	.0151	.0145	.0138	.0131	.0125	.0119	.0112
.0900	.0152	.0146	.0140	.0134	.0128	.0122	.0116	.0110	.0105	.0099	.0094
.1000	.0131	.0126	.0120	.0115	.0110	.0104	.0099	.0094	.0089	.0084	.0079

TABLE 76. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9887	.9886	.9886	.9885	.9884	.9882	.9882	.9881	.9880
.0002	.9844	.9843	.9842	.9841	.9840	.9840	.9838	.9837	.9835	.9834	.9834	.9832
.0003	.9811	.9809	.9808	.9806	.9805	.9805	.9803	.9801	.9799	.9798	.9797	.9795
.0004	.9783	.9781	.9779	.9778	.9777	.9776	.9774	.9772	.9770	.9768	.9767	.9765
.0005	.9758	.9756	.9754	.9753	.9751	.9750	.9748	.9746	.9744	.9742	.9741	.9739
.0006	.9736	.9734	.9732	.9730	.9729	.9728	.9726	.9723	.9720	.9719	.9718	.9715
.0007	.9716	.9714	.9712	.9710	.9708	.9707	.9705	.9702	.9699	.9698	.9696	.9693
.0008	.9697	.9695	.9693	.9691	.9689	.9688	.9685	.9683	.9680	.9678	.9677	.9673
.0009	.9680	.9678	.9676	.9673	.9671	.9670	.9667	.9665	.9661	.9659	.9658	.9655
.0010	.9664	.9662	.9659	.9656	.9655	.9654	.9651	.9648	.9644	.9642	.9641	.9637
.0020	.9536	.9533	.9530	.9526	.9524	.9522	.9518	.9514	.9509	.9507	.9505	.9500
.0030	.9443	.9439	.9435	.9431	.9428	.9426	.9421	.9416	.9411	.9407	.9405	.9399
.0040	.9367	.9362	.9358	.9353	.9350	.9348	.9342	.9336	.9330	.9327	.9324	.9317
.0050	.9302	.9297	.9292	.9286	.9283	.9281	.9275	.9268	.9261	.9257	.9255	.9247
.0060	.9244	.9239	.9234	.9228	.9224	.9222	.9215	.9208	.9201	.9196	.9193	.9185
.0070	.9193	.9187	.9181	.9175	.9171	.9168	.9162	.9154	.9147	.9142	.9139	.9130
.0080	.9146	.9140	.9134	.9127	.9123	.9120	.9113	.9105	.9097	.9092	.9089	.9079
.0090	.9102	.9096	.9090	.9083	.9079	.9076	.9068	.9060	.9051	.9046	.9043	.9033
.0100	.9062	.9056	.9049	.9042	.9038	.9034	.9026	.9018	.9009	.9004	.9000	.8990
.0200	.8762	.8754	.8745	.8736	.8730	.8726	.8716	.8705	.8693	.8686	.8682	.8669
.0300	.8558	.8549	.8539	.8528	.8521	.8517	.8505	.8492	.8479	.8471	.8465	.8451
.0400	.8401	.8391	.8380	.8368	.8361	.8355	.8342	.8329	.8314	.8305	.8299	.8283
.0500	.8273	.8262	.8250	.8237	.8230	.8224	.8210	.8195	.8180	.8170	.8163	.8146
.0600	.8164	.8152	.8140	.8127	.8118	.8112	.8098	.8082	.8066	.8056	.8049	.8030
.0700	.8070	.8057	.8044	.8031	.8022	.8016	.8000	.7984	.7967	.7956	.7949	.7930
.0800	.7986	.7973	.7960	.7946	.7937	.7930	.7914	.7897	.7879	.7869	.7861	.7841
.0900	.7911	.7898	.7884	.7870	.7860	.7853	.7837	.7820	.7801	.7790	.7782	.7762
.1000	.7844	.7830	.7816	.7801	.7791	.7784	.7767	.7750	.7731	.7719	.7711	.7690

TABLE 76. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9877	.9876	.9875	.9873	.9872	.9870	.9868	.9867	.9865	.9863
.0002	.9830	.9828	.9826	.9824	.9822	.9820	.9818	.9815	.9813	.9810	.9808
.0003	.9793	.9791	.9789	.9786	.9784	.9781	.9778	.9775	.9772	.9769	.9766
.0004	.9763	.9760	.9757	.9755	.9752	.9749	.9745	.9742	.9739	.9735	.9732
.0005	.9736	.9733	.9730	.9727	.9724	.9720	.9717	.9713	.9709	.9705	.9701
.0006	.9712	.9709	.9705	.9702	.9699	.9695	.9691	.9687	.9683	.9679	.9674
.0007	.9690	.9687	.9683	.9680	.9676	.9672	.9668	.9663	.9659	.9654	.9650
.0008	.9670	.9666	.9663	.9659	.9655	.9650	.9646	.9642	.9637	.9632	.9627
.0009	.9651	.9647	.9643	.9639	.9635	.9631	.9626	.9621	.9616	.9611	.9606
.0010	.9633	.9629	.9625	.9621	.9617	.9612	.9607	.9602	.9597	.9591	.9586
.0020	.9495	.9489	.9484	.9478	.9472	.9465	.9459	.9452	.9445	.9437	.9430
.0030	.9393	.9386	.9380	.9373	.9365	.9358	.9350	.9342	.9333	.9325	.9315
.0040	.9310	.9303	.9295	.9287	.9279	.9270	.9262	.9252	.9243	.9233	.9222
.0050	.9239	.9231	.9223	.9214	.9205	.9196	.9186	.9176	.9165	.9155	.9143
.0060	.9177	.9168	.9159	.9150	.9140	.9130	.9120	.9109	.9097	.9086	.9073
.0070	.9121	.9112	.9102	.9092	.9082	.9071	.9060	.9048	.9036	.9024	.9011
.0080	.9070	.9060	.9050	.9040	.9029	.9018	.9006	.8993	.8981	.8968	.8954
.0090	.9023	.9013	.9003	.8992	.8980	.8968	.8956	.8943	.8929	.8916	.8901
.0100	.8980	.8969	.8958	.8947	.8935	.8922	.8909	.8896	.8882	.8868	.8853
.0200	.8656	.8642	.8628	.8613	.8598	.8581	.8565	.8547	.8529	.8511	.8491
.0300	.8436	.8420	.8403	.8386	.8369	.8350	.8331	.8311	.8291	.8270	.8247
.0400	.8267	.8249	.8231	.8213	.8193	.8173	.8152	.8130	.8108	.8085	.8060
.0500	.8129	.8110	.8091	.8071	.8050	.8029	.8006	.7983	.7959	.7934	.7908
.0600	.8012	.7992	.7972	.7951	.7929	.7907	.7883	.7858	.7833	.7807	.7780
.0700	.7911	.7890	.7869	.7847	.7825	.7801	.7776	.7750	.7724	.7697	.7668
.0800	.7821	.7800	.7778	.7755	.7732	.7707	.7682	.7655	.7628	.7600	.7570
.0900	.7741	.7719	.7697	.7673	.7649	.7624	.7598	.7570	.7542	.7513	.7483
.1000	.7669	.7646	.7623	.7599	.7574	.7548	.7522	.7493	.7465	.7435	.7404

TABLE 77. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*
(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9778	.9776	.9774	.9773	.9773	.9771	.9769	.9766	.9765	.9764	.9762
.0002	.9691	.9689	.9687	.9684	.9683	.9682	.9679	.9676	.9673	.9671	.9670	.9667
.0003	.9625	.9622	.9619	.9617	.9615	.9613	.9610	.9607	.9603	.9601	.9599	.9595
.0004	.9570	.9567	.9564	.9560	.9558	.9557	.9553	.9549	.9545	.9542	.9540	.9536
.0005	.9522	.9518	.9515	.9511	.9509	.9507	.9503	.9499	.9494	.9491	.9489	.9484
.0006	.9479	.9475	.9472	.9468	.9465	.9463	.9459	.9454	.9449	.9446	.9443	.9438
.0007	.9440	.9436	.9432	.9428	.9425	.9423	.9418	.9413	.9407	.9404	.9402	.9396
.0008	.9404	.9400	.9396	.9391	.9388	.9386	.9381	.9375	.9370	.9366	.9364	.9357
.0009	.9370	.9366	.9362	.9357	.9354	.9351	.9346	.9340	.9334	.9330	.9328	.9321
.0010	.9339	.9335	.9330	.9325	.9321	.9319	.9313	.9307	.9301	.9297	.9294	.9287
.0020	.9094	.9088	.9082	.9075	.9071	.9067	.9060	.9052	.9043	.9038	.9034	.9025
.0030	.8917	.8910	.8902	.8894	.8889	.8885	.8876	.8866	.8856	.8850	.8846	.8834
.0040	.8774	.8766	.8757	.8748	.8742	.8738	.8728	.8717	.8705	.8698	.8694	.8681
.0050	.8652	.8643	.8634	.8624	.8617	.8613	.8602	.8590	.8577	.8570	.8565	.8551
.0060	.8546	.8536	.8526	.8515	.8509	.8504	.8492	.8479	.8466	.8458	.8452	.8437
.0070	.8450	.8440	.8430	.8418	.8411	.8406	.8393	.8380	.8366	.8357	.8351	.8336
.0080	.8364	.8354	.8342	.8331	.8323	.8318	.8304	.8291	.8275	.8266	.8260	.8244
.0090	.8285	.8274	.8263	.8250	.8242	.8237	.8223	.8208	.8193	.8183	.8177	.8160
.0100	.8212	.8201	.8189	.8176	.8168	.8162	.8148	.8133	.8116	.8107	.8100	.8082
.0200	.7678	.7663	.7648	.7632	.7622	.7615	.7597	.7578	.7558	.7545	.7537	.7515
.0300	.7324	.7308	.7291	.7273	.7262	.7253	.7233	.7212	.7189	.7176	.7166	.7141
.0400	.7058	.7040	.7022	.7003	.6990	.6981	.6960	.6937	.6912	.6898	.6887	.6861
.0500	.6844	.6825	.6806	.6786	.6772	.6763	.6740	.6716	.6690	.6675	.6664	.6636
.0600	.6665	.6646	.6626	.6604	.6591	.6581	.6557	.6532	.6505	.6489	.6478	.6449
.0700	.6512	.6492	.6471	.6449	.6435	.6425	.6400	.6375	.6347	.6330	.6319	.6288
.0800	.6378	.6357	.6336	.6313	.6299	.6289	.6263	.6237	.6209	.6192	.6180	.6149
.0900	.6259	.6238	.6216	.6193	.6178	.6168	.6142	.6115	.6086	.6069	.6056	.6025
.1000	.6152	.6131	.6109	.6085	.6070	.6059	.6033	.6006	.5976	.5958	.5946	.5914

TABLE 77. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9759	.9756	.9754	.9751	.9748	.9745	.9742	.9738	.9735	.9731	.9728
.0002	.9663	.9659	.9656	.9652	.9648	.9643	.9639	.9634	.9629	.9625	.9619
.0003	.9591	.9586	.9582	.9577	.9572	.9567	.9562	.9556	.9550	.9544	.9538
.0004	.9531	.9526	.9521	.9515	.9509	.9503	.9497	.9491	.9484	.9478	.9470
.0005	.9479	.9473	.9467	.9461	.9455	.9448	.9442	.9434	.9427	.9420	.9412
.0006	.9432	.9426	.9420	.9413	.9406	.9399	.9392	.9384	.9376	.9368	.9359
.0007	.9390	.9383	.9376	.9369	.9362	.9354	.9346	.9338	.9330	.9321	.9312
.0008	.9351	.9344	.9336	.9329	.9321	.9313	.9305	.9296	.9287	.9278	.9268
.0009	.9314	.9307	.9299	.9291	.9283	.9275	.9266	.9257	.9247	.9237	.9227
.0010	.9280	.9272	.9264	.9256	.9248	.9239	.9229	.9220	.9210	.9200	.9189
.0020	.9015	.9004	.8994	.8983	.8971	.8959	.8947	.8934	.8920	.8906	.8892
.0030	.8823	.8810	.8798	.8785	.8771	.8757	.8742	.8727	.8711	.8695	.8677
.0040	.8668	.8654	.8640	.8625	.8610	.8594	.8578	.8560	.8543	.8525	.8505
.0050	.8537	.8522	.8506	.8490	.8474	.8456	.8438	.8420	.8400	.8381	.8359
.0060	.8422	.8406	.8389	.8372	.8355	.8336	.8317	.8297	.8276	.8255	.8232
.0070	.8320	.8303	.8285	.8267	.8248	.8229	.8208	.8187	.8165	.8143	.8119
.0080	.8227	.8209	.8191	.8172	.8152	.8132	.8110	.8088	.8065	.8042	.8017
.0090	.8142	.8123	.8105	.8085	.8064	.8043	.8021	.7997	.7974	.7949	.7923
.0100	.8064	.8044	.8025	.8004	.7983	.7961	.7938	.7914	.7889	.7864	.7837
.0200	.7492	.7468	.7444	.7418	.7392	.7364	.7336	.7306	.7275	.7244	.7210
.0300	.7116	.7089	.7062	.7033	.7004	.6973	.6941	.6908	.6874	.6839	.6802
.0400	.6834	.6805	.6775	.6745	.6713	.6680	.6646	.6610	.6574	.6537	.6497
.0500	.6607	.6577	.6546	.6514	.6481	.6446	.6410	.6373	.6335	.6296	.6254
.0600	.6419	.6387	.6355	.6322	.6287	.6251	.6214	.6175	.6136	.6095	.6052
.0700	.6258	.6225	.6192	.6158	.6122	.6085	.6047	.6007	.5966	.5925	.5881
.0800	.6117	.6084	.6050	.6015	.5978	.5940	.5901	.5860	.5819	.5776	.5731
.0900	.5993	.5959	.5924	.5888	.5851	.5812	.5773	.5731	.5688	.5645	.5599
.1000	.5881	.5846	.5811	.5775	.5737	.5698	.5657	.5615	.5572	.5528	.5481

TABLE 78. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*
(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9671	.9669	.9666	.9664	.9662	.9661	.9658	.9655	.9652	.9650	.9648	.9645
.0002	.9540	.9537	.9534	.9530	.9528	.9526	.9522	.9518	.9514	.9511	.9509	.9504
.0003	.9443	.9439	.9435	.9430	.9428	.9426	.9421	.9416	.9410	.9407	.9405	.9399
.0004	.9362	.9357	.9353	.9348	.9345	.9342	.9337	.9331	.9325	.9321	.9318	.9312
.0005	.9291	.9287	.9281	.9276	.9273	.9270	.9264	.9258	.9251	.9246	.9244	.9236
.0006	.9229	.9223	.9218	.9212	.9208	.9206	.9199	.9192	.9185	.9180	.9177	.9169
.0007	.9172	.9166	.9160	.9154	.9150	.9147	.9140	.9133	.9125	.9120	.9116	.9108
.0008	.9119	.9113	.9107	.9100	.9096	.9093	.9086	.9078	.9069	.9064	.9061	.9051
.0009	.9071	.9064	.9058	.9051	.9046	.9043	.9035	.9027	.9018	.9013	.9009	.8999
.0010	.9025	.9019	.9012	.9004	.9000	.8996	.8988	.8979	.8970	.8964	.8960	.8950
.0020	.8673	.8664	.8655	.8645	.8639	.8634	.8623	.8612	.8599	.8592	.8587	.8573
.0030	.8420	.8410	.8399	.8388	.8380	.8375	.8362	.8349	.8334	.8325	.8319	.8303
.0040	.8218	.8207	.8195	.8182	.8174	.8168	.8153	.8139	.8122	.8113	.8106	.8088
.0050	.8048	.8035	.8022	.8008	.8000	.7993	.7978	.7962	.7944	.7933	.7926	.7907
.0060	.7900	.7886	.7873	.7858	.7848	.7842	.7825	.7808	.7789	.7778	.7770	.7750
.0070	.7768	.7754	.7740	.7724	.7714	.7707	.7690	.7672	.7652	.7640	.7632	.7610
.0080	.7650	.7635	.7620	.7604	.7593	.7586	.7568	.7549	.7528	.7516	.7507	.7485
.0090	.7542	.7527	.7511	.7494	.7483	.7475	.7456	.7437	.7416	.7403	.7394	.7371
.0100	.7442	.7427	.7410	.7393	.7382	.7374	.7354	.7334	.7312	.7299	.7290	.7266
.0200	.6728	.6709	.6689	.6668	.6654	.6645	.6621	.6597	.6570	.6554	.6543	.6514
.0300	.6268	.6248	.6226	.6203	.6188	.6177	.6152	.6125	.6096	.6078	.6066	.6035
.0400	.5929	.5907	.5884	.5860	.5844	.5833	.5806	.5778	.5747	.5729	.5716	.5683
.0500	.5662	.5639	.5615	.5590	.5573	.5562	.5534	.5504	.5472	.5454	.5440	.5406
.0600	.5441	.5418	.5393	.5367	.5351	.5339	.5310	.5280	.5247	.5228	.5214	.5179
.0700	.5255	.5231	.5205	.5179	.5162	.5150	.5120	.5090	.5056	.5037	.5023	.4987
.0800	.5093	.5069	.5043	.5016	.4999	.4987	.4957	.4926	.4892	.4872	.4858	.4821
.0900	.4952	.4927	.4901	.4874	.4856	.4844	.4813	.4782	.4748	.4728	.4713	.4676
.1000	.4826	.4801	.4774	.4747	.4729	.4717	.4686	.4654	.4620	.4599	.4585	.4548

TABLE 78. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Scatchard* — Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9641	.9637	.9633	.9629	.9624	.9620	.9615	.9610	.9605	.9600	.9594
.0002	.9499	.9493	.9488	.9482	.9476	.9470	.9463	.9456	.9449	.9442	.9434
.0003	.9393	.9386	.9379	.9372	.9365	.9357	.9350	.9341	.9333	.9324	.9315
.0004	.9305	.9297	.9289	.9281	.9273	.9265	.9256	.9246	.9237	.9227	.9216
.0005	.9228	.9220	.9212	.9203	.9194	.9184	.9174	.9164	.9153	.9142	.9130
.0006	.9160	.9151	.9142	.9133	.9123	.9112	.9102	.9090	.9079	.9067	.9054
.0007	.9099	.9089	.9079	.9069	.9059	.9047	.9036	.9024	.9012	.8999	.8985
.0008	.9042	.9032	.9021	.9011	.8999	.8988	.8975	.8963	.8950	.8936	.8922
.0009	.8989	.8978	.8968	.8956	.8944	.8932	.8919	.8906	.8892	.8878	.8863
.0010	.8940	.8929	.8917	.8905	.8893	.8880	.8867	.8853	.8838	.8824	.8808
.0020	.8559	.8544	.8529	.8513	.8497	.8480	.8462	.8444	.8425	.8405	.8384
.0030	.8287	.8270	.8252	.8234	.8215	.8195	.8174	.8152	.8130	.8107	.8083
.0040	.8070	.8051	.8031	.8011	.7990	.7967	.7944	.7920	.7896	.7871	.7844
.0050	.7887	.7866	.7845	.7823	.7800	.7776	.7752	.7726	.7699	.7672	.7643
.0060	.7729	.7707	.7684	.7661	.7636	.7611	.7585	.7557	.7529	.7500	.7469
.0070	.7588	.7565	.7541	.7517	.7491	.7464	.7437	.7408	.7378	.7348	.7316
.0080	.7462	.7438	.7413	.7387	.7361	.7333	.7304	.7274	.7243	.7211	.7178
.0090	.7347	.7322	.7296	.7269	.7242	.7213	.7183	.7152	.7120	.7087	.7052
.0100	.7241	.7215	.7189	.7161	.7133	.7103	.7072	.7040	.7007	.6974	.6938
.0200	.6485	.6454	.6422	.6389	.6355	.6319	.6283	.6244	.6205	.6165	.6123
.0300	.6003	.5969	.5934	.5898	.5861	.5822	.5783	.5741	.5699	.5656	.5610
.0400	.5649	.5613	.5577	.5539	.5500	.5460	.5418	.5374	.5330	.5285	.5237
.0500	.5371	.5334	.5296	.5257	.5217	.5175	.5132	.5087	.5042	.4995	.4946
.0600	.5143	.5105	.5066	.5026	.4986	.4943	.4899	.4853	.4806	.4759	.4709
.0700	.4950	.4912	.4873	.4832	.4790	.4747	.4702	.4656	.4608	.4560	.4509
.0800	.4784	.4745	.4706	.4665	.4623	.4578	.4533	.4486	.4439	.4390	.4339
.0900	.4639	.4600	.4560	.4518	.4476	.4431	.4386	.4338	.4290	.4242	.4190
.1000	.4510	.4470	.4430	.4388	.4346	.4301	.4255	.4208	.4159	.4110	.4058

TABLE 79. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9564	.9561	.9557	.9554	.9552	.9550	.9546	.9542	.9538	.9535	.9534	.9529
.0002	.9392	.9388	.9383	.9379	.9376	.9374	.9368	.9363	.9357	.9353	.9351	.9344
.0003	.9264	.9259	.9253	.9248	.9244	.9242	.9235	.9229	.9222	.9217	.9214	.9206
.0004	.9158	.9152	.9146	.9140	.9136	.9133	.9126	.9118	.9110	.9105	.9102	.9093
.0005	.9066	.9060	.9053	.9046	.9042	.9039	.9031	.9023	.9014	.9008	.9004	.8995
.0006	.8985	.8978	.8971	.8963	.8959	.8955	.8946	.8937	.8928	.8922	.8918	.8907
.0007	.8911	.8904	.8896	.8888	.8883	.8879	.8870	.8860	.8850	.8844	.8840	.8828
.0008	.8843	.8836	.8828	.8819	.8813	.8810	.8800	.8790	.8779	.8772	.8768	.8756
.0009	.8781	.8773	.8764	.8755	.8749	.8745	.8735	.8724	.8713	.8706	.8701	.8688
.0010	.8722	.8713	.8704	.8695	.8689	.8685	.8674	.8663	.8651	.8644	.8639	.8625
.0020	.8271	.8260	.8248	.8236	.8228	.8222	.8208	.8193	.8178	.8168	.8162	.8144
.0030	.7951	.7938	.7925	.7910	.7901	.7894	.7878	.7861	.7843	.7832	.7824	.7804
.0040	.7698	.7683	.7668	.7652	.7642	.7635	.7617	.7598	.7578	.7566	.7558	.7536
.0050	.7486	.7470	.7454	.7437	.7426	.7418	.7399	.7379	.7357	.7344	.7335	.7312
.0060	.7303	.7286	.7269	.7251	.7239	.7231	.7211	.7190	.7167	.7153	.7143	.7118
.0070	.7141	.7124	.7106	.7087	.7075	.7066	.7045	.7023	.6999	.6984	.6974	.6948
.0080	.6996	.6978	.6960	.6940	.6927	.6918	.6896	.6873	.6848	.6833	.6823	.6796
.0090	.6865	.6846	.6827	.6807	.6794	.6784	.6762	.6738	.6712	.6697	.6686	.6658
.0100	.6744	.6725	.6706	.6685	.6671	.6662	.6638	.6614	.6587	.6572	.6561	.6532
.0200	.5895	.5873	.5850	.5825	.5809	.5798	.5771	.5742	.5712	.5693	.5680	.5647
.0300	.5365	.5341	.5316	.5290	.5273	.5261	.5232	.5201	.5169	.5149	.5135	.5100
.0400	.4981	.4957	.4931	.4904	.4886	.4874	.4844	.4812	.4778	.4758	.4744	.4707
.0500	.4684	.4659	.4632	.4604	.4587	.4574	.4543	.4511	.4476	.4456	.4441	.4404
.0600	.4442	.4417	.4390	.4362	.4344	.4331	.4300	.4267	.4232	.4211	.4197	.4159
.0700	.4240	.4215	.4187	.4159	.4141	.4128	.4096	.4064	.4028	.4007	.3993	.3955
.0800	.4068	.4042	.4014	.3986	.3968	.3955	.3923	.3890	.3855	.3834	.3819	.3781
.0900	.3917	.3891	.3864	.3835	.3817	.3804	.3772	.3739	.3704	.3683	.3668	.3630
.1000	.3785	.3759	.3731	.3703	.3685	.3672	.3640	.3607	.3571	.3550	.3536	.3497

TABLE 79. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Scatchard* — Continued

(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9524	.9519	.9514	.9508	.9502	.9496	.9490	.9484	.9477	.9470	.9463
.0002	.9338	.9330	.9323	.9316	.9308	.9299	.9291	.9282	.9273	.9263	.9253
.0003	.9198	.9190	.9181	.9172	.9163	.9153	.9142	.9132	.9120	.9109	.9097
.0004	.9084	.9074	.9064	.9054	.9043	.9032	.9020	.9008	.8995	.8982	.8969
.0005	.8984	.8974	.8963	.8951	.8940	.8927	.8914	.8901	.8887	.8873	.8858
.0006	.8896	.8885	.8873	.8861	.8848	.8834	.8821	.8806	.8791	.8776	.8759
.0007	.8817	.8804	.8792	.8778	.8765	.8750	.8736	.8720	.8704	.8688	.8670
.0008	.8743	.8730	.8717	.8703	.8689	.8673	.8658	.8641	.8625	.8607	.8589
.0009	.8675	.8662	.8648	.8633	.8618	.8602	.8586	.8568	.8551	.8533	.8513
.0010	.8612	.8598	.8583	.8568	.8552	.8535	.8518	.8500	.8482	.8463	.8443
.0020	.8127	.8108	.8089	.8069	.8048	.8027	.8004	.7981	.7957	.7932	.7906
.0030	.7784	.7762	.7740	.7717	.7693	.7668	.7643	.7616	.7588	.7560	.7529
.0040	.7513	.7489	.7465	.7440	.7414	.7386	.7358	.7328	.7298	.7267	.7234
.0050	.7287	.7262	.7236	.7209	.7181	.7151	.7121	.7089	.7056	.7023	.6988
.0060	.7093	.7066	.7038	.7010	.6980	.6949	.6917	.6883	.6849	.6814	.6777
.0070	.6922	.6893	.6864	.6834	.6804	.6771	.6738	.6703	.6667	.6631	.6592
.0080	.6768	.6739	.6709	.6678	.6646	.6612	.6578	.6542	.6505	.6467	.6427
.0090	.6629	.6599	.6568	.6536	.6503	.6469	.6433	.6396	.6358	.6319	.6278
.0100	.6502	.6471	.6440	.6407	.6373	.6337	.6301	.6263	.6224	.6184	.6142
.0200	.5613	.5577	.5541	.5503	.5464	.5423	.5381	.5337	.5293	.5247	.5199
.0300	.5064	.5025	.4987	.4946	.4905	.4862	.4818	.4772	.4725	.4677	.4626
.0400	.4670	.4630	.4590	.4549	.4507	.4462	.4417	.4369	.4321	.4273	.4221
.0500	.4366	.4326	.4285	.4243	.4200	.4155	.4109	.4061	.4013	.3963	.3911
.0600	.4120	.4080	.4039	.3997	.3953	.3908	.3862	.3814	.3765	.3715	.3663
.0700	.3916	.3875	.3834	.3792	.3748	.3703	.3657	.3608	.3560	.3510	.3458
.0800	.3742	.3701	.3660	.3618	.3574	.3529	.3483	.3434	.3386	.3337	.3285
.0900	.3591	.3551	.3509	.3467	.3424	.3378	.3332	.3284	.3236	.3187	.3135
.1000	.3459	.3418	.3377	.3335	.3292	.3246	.3201	.3153	.3105	.3056	.3004

TABLE 80. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9353	.9348	.9343	.9338	.9335	.9333	.9327	.9321	.9315	.9311	.9309	.9302
.0002	.9102	.9096	.9089	.9083	.9078	.9075	.9068	.9060	.9051	.9046	.9042	.9033
.0003	.8916	.8909	.8901	.8893	.8888	.8884	.8875	.8866	.8855	.8849	.8845	.8834
.0004	.8764	.8756	.8747	.8738	.8732	.8728	.8718	.8707	.8695	.8688	.8683	.8670
.0005	.8633	.8624	.8614	.8604	.8598	.8593	.8582	.8570	.8557	.8550	.8544	.8530
.0006	.8517	.8507	.8497	.8486	.8479	.8474	.8462	.8449	.8436	.8427	.8422	.8406
.0007	.8412	.8402	.8391	.8379	.8372	.8367	.8354	.8340	.8326	.8317	.8311	.8295
.0008	.8316	.8306	.8294	.8282	.8274	.8269	.8255	.8241	.8225	.8216	.8210	.8193
.0009	.8228	.8216	.8204	.8192	.8184	.8178	.8164	.8149	.8132	.8123	.8116	.8098
.0010	.8145	.8134	.8121	.8108	.8099	.8093	.8078	.8063	.8046	.8036	.8029	.8011
.0020	.7522	.7507	.7491	.7474	.7463	.7455	.7436	.7416	.7395	.7382	.7373	.7350
.0030	.7090	.7073	.7054	.7035	.7023	.7014	.6993	.6970	.6946	.6931	.6921	.6894
.0040	.6754	.6735	.6715	.6694	.6681	.6671	.6648	.6624	.6597	.6581	.6570	.6542
.0050	.6477	.6457	.6436	.6414	.6399	.6389	.6364	.6339	.6311	.6294	.6282	.6252
.0060	.6241	.6220	.6198	.6175	.6160	.6149	.6123	.6096	.6067	.6050	.6038	.6006
.0070	.6035	.6013	.5990	.5966	.5951	.5940	.5913	.5885	.5855	.5837	.5825	.5792
.0080	.5852	.5830	.5806	.5782	.5766	.5754	.5727	.5698	.5667	.5649	.5636	.5602
.0090	.5688	.5665	.5641	.5616	.5600	.5588	.5560	.5531	.5499	.5480	.5467	.5433
.0100	.5539	.5515	.5491	.5465	.5449	.5437	.5409	.5379	.5347	.5327	.5314	.5279
.0200	.4526	.4501	.4474	.4446	.4428	.4415	.4384	.4352	.4317	.4296	.4281	.4244
.0300	.3929	.3903	.3876	.3847	.3829	.3816	.3784	.3751	.3716	.3695	.3680	.3642
.0400	.3516	.3490	.3462	.3434	.3416	.3403	.3371	.3338	.3303	.3282	.3267	.3229
.0500	.3206	.3180	.3153	.3124	.3106	.3093	.3062	.3030	.2995	.2974	.2960	.2922
.0600	.2961	.2935	.2909	.2881	.2863	.2850	.2819	.2787	.2753	.2733	.2719	.2682
.0700	.2761	.2736	.2710	.2682	.2665	.2652	.2622	.2590	.2557	.2537	.2523	.2487
.0800	.2594	.2569	.2543	.2516	.2499	.2487	.2457	.2426	.2393	.2374	.2360	.2325
.0900	.2452	.2427	.2402	.2375	.2358	.2346	.2317	.2287	.2254	.2235	.2222	.2187
.1000	.2329	.2305	.2279	.2253	.2237	.2225	.2196	.2166	.2134	.2115	.2102	.2068

TABLE 80. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*—Continued

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9295	.9287	.9279	.9271	.9263	.9254	.9245	.9235	.9226	.9216	.9205
.0002	.9023	.9013	.9002	.8991	.8980	.8968	.8955	.8942	.8929	.8915	.8901
.0003	.8822	.8810	.8797	.8784	.8770	.8756	.8741	.8726	.8710	.8694	.8676
.0004	.8657	.8644	.8629	.8615	.8599	.8583	.8567	.8549	.8531	.8513	.8493
.0005	.8516	.8501	.8485	.8469	.8452	.8435	.8417	.8398	.8378	.8358	.8337
.0006	.8391	.8375	.8358	.8341	.8323	.8304	.8284	.8264	.8243	.8221	.8198
.0007	.8278	.8261	.8243	.8225	.8206	.8186	.8165	.8143	.8121	.8098	.8073
.0008	.8175	.8157	.8138	.8119	.8099	.8078	.8056	.8033	.8010	.7986	.7960
.0009	.8080	.8061	.8042	.8021	.8000	.7978	.7955	.7931	.7907	.7882	.7855
.0010	.7992	.7972	.7952	.7931	.7909	.7886	.7862	.7837	.7812	.7786	.7758
.0020	.7326	.7301	.7275	.7248	.7220	.7191	.7161	.7130	.7098	.7065	.7030
.0030	.6868	.6839	.6810	.6779	.6748	.6715	.6681	.6646	.6610	.6573	.6534
.0040	.6512	.6481	.6450	.6417	.6383	.6348	.6311	.6273	.6234	.6195	.6152
.0050	.6221	.6188	.6155	.6120	.6085	.6047	.6009	.5969	.5928	.5886	.5841
.0060	.5974	.5939	.5905	.5869	.5832	.5793	.5753	.5711	.5668	.5625	.5579
.0070	.5758	.5723	.5687	.5650	.5612	.5572	.5531	.5488	.5444	.5399	.5352
.0080	.5568	.5532	.5495	.5457	.5418	.5377	.5335	.5291	.5246	.5201	.5152
.0090	.5398	.5361	.5323	.5284	.5245	.5203	.5160	.5115	.5069	.5023	.4974
.0100	.5243	.5206	.5168	.5128	.5088	.5045	.5002	.4956	.4910	.4863	.4813
.0200	.4205	.4165	.4124	.4082	.4039	.3993	.3947	.3899	.3850	.3801	.3749
.0300	.3603	.3562	.3521	.3479	.3435	.3390	.3344	.3296	.3248	.3199	.3147
.0400	.3191	.3151	.3110	.3068	.3025	.2981	.2935	.2888	.2841	.2793	.2742
.0500	.2885	.2845	.2805	.2764	.2722	.2678	.2634	.2588	.2542	.2495	.2446
.0600	.2645	.2606	.2567	.2527	.2486	.2443	.2400	.2355	.2310	.2265	.2217
.0700	.2451	.2412	.2374	.2335	.2295	.2253	.2211	.2168	.2124	.2080	.2034
.0800	.2289	.2252	.2214	.2176	.2137	.2096	.2055	.2013	.1970	.1927	.1882
.0900	.2152	.2116	.2079	.2041	.2003	.1964	.1924	.1882	.1841	.1799	.1755
.1000	.2034	.1998	.1963	.1926	.1888	.1850	.1811	.1770	.1730	.1689	.1647

TABLE 81. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*
(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9146	.9140	.9134	.9128	.9124	.9121	.9113	.9106	.9097	.9093	.9089	.9080
.0002	.8821	.8813	.8805	.8796	.8790	.8786	.8777	.8766	.8755	.8748	.8744	.8731
.0003	.8582	.8572	.8563	.8552	.8546	.8541	.8529	.8517	.8504	.8496	.8490	.8476
.0004	.8387	.8376	.8365	.8354	.8346	.8341	.8328	.8314	.8299	.8290	.8284	.8268
.0005	.8220	.8209	.8197	.8184	.8176	.8170	.8156	.8141	.8124	.8115	.8108	.8090
.0006	.8073	.8061	.8048	.8034	.8026	.8019	.8004	.7988	.7971	.7960	.7953	.7934
.0007	.7941	.7928	.7914	.7900	.7891	.7884	.7868	.7851	.7832	.7821	.7814	.7794
.0008	.7821	.7807	.7793	.7777	.7768	.7761	.7744	.7726	.7707	.7695	.7687	.7666
.0009	.7710	.7696	.7681	.7665	.7655	.7647	.7630	.7611	.7591	.7579	.7571	.7549
.0010	.7607	.7592	.7577	.7560	.7550	.7542	.7524	.7505	.7484	.7471	.7463	.7440
.0020	.6841	.6822	.6803	.6782	.6769	.6760	.6737	.6713	.6687	.6672	.6661	.6633
.0030	.6322	.6302	.6280	.6257	.6242	.6232	.6207	.6180	.6151	.6134	.6122	.6091
.0040	.5926	.5904	.5880	.5856	.5840	.5829	.5802	.5774	.5743	.5725	.5712	.5679
.0050	.5604	.5581	.5556	.5531	.5515	.5503	.5475	.5445	.5413	.5394	.5381	.5346
.0060	.5333	.5309	.5284	.5258	.5241	.5229	.5200	.5169	.5136	.5117	.5103	.5067
.0070	.5100	.5075	.5049	.5023	.5005	.4993	.4963	.4932	.4898	.4878	.4864	.4828
.0080	.4895	.4870	.4844	.4816	.4799	.4786	.4756	.4724	.4690	.4670	.4655	.4618
.0090	.4712	.4687	.4661	.4633	.4615	.4603	.4572	.4540	.4505	.4485	.4470	.4433
.0100	.4549	.4523	.4496	.4468	.4451	.4438	.4407	.4374	.4339	.4319	.4304	.4266
.0200	.3475	.3449	.3422	.3393	.3375	.3362	.3330	.3298	.3262	.3241	.3227	.3189
.0300	.2878	.2853	.2826	.2798	.2780	.2768	.2737	.2705	.2671	.2651	.2637	.2601
.0400	.2481	.2457	.2431	.2405	.2388	.2375	.2346	.2316	.2283	.2264	.2250	.2216
.0500	.2194	.2170	.2146	.2120	.2104	.2092	.2064	.2035	.2004	.1985	.1972	.1939
.0600	.1973	.1951	.1927	.1902	.1887	.1876	.1849	.1821	.1791	.1773	.1761	.1729
.0700	.1798	.1776	.1753	.1730	.1715	.1704	.1678	.1651	.1623	.1606	.1594	.1564
.0800	.1655	.1633	.1612	.1589	.1574	.1564	.1539	.1513	.1486	.1470	.1458	.1429
.0900	.1535	.1514	.1493	.1471	.1457	.1447	.1423	.1398	.1372	.1356	.1345	.1318
.1000	.1433	.1413	.1392	.1371	.1358	.1348	.1325	.1301	.1275	.1260	.1250	.1223

TABLE 81. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9071	.9061	.9051	.9040	.9030	.9018	.9006	.8994	.8981	.8968	.8954
.0002	.8719	.8706	.8692	.8678	.8663	.8648	.8632	.8615	.8598	.8581	.8562
.0003	.8461	.8445	.8429	.8412	.8395	.8377	.8358	.8338	.8318	.8298	.8275
.0004	.8251	.8234	.8216	.8197	.8178	.8157	.8136	.8114	.8091	.8068	.8043
.0005	.8072	.8053	.8033	.8013	.7992	.7969	.7947	.7923	.7898	.7873	.7846
.0006	.7915	.7894	.7873	.7851	.7829	.7805	.7780	.7755	.7728	.7701	.7673
.0007	.7773	.7751	.7729	.7706	.7682	.7657	.7631	.7604	.7576	.7548	.7518
.0008	.7645	.7622	.7598	.7574	.7549	.7523	.7496	.7467	.7438	.7409	.7377
.0009	.7526	.7502	.7478	.7453	.7427	.7400	.7371	.7342	.7312	.7281	.7248
.0010	.7417	.7392	.7367	.7341	.7314	.7285	.7256	.7226	.7194	.7162	.7128
.0020	.6604	.6574	.6543	.6511	.6477	.6443	.6407	.6369	.6331	.6292	.6251
.0030	.6059	.6025	.5991	.5955	.5919	.5880	.5841	.5800	.5758	.5715	.5669
.0040	.5645	.5609	.5573	.5535	.5496	.5455	.5414	.5370	.5326	.5281	.5232
.0050	.5311	.5273	.5236	.5196	.5156	.5114	.5071	.5025	.4979	.4933	.4883
.0060	.5031	.4993	.4954	.4913	.4872	.4829	.4784	.4738	.4691	.4643	.4593
.0070	.4791	.4752	.4712	.4671	.4629	.4585	.4540	.4493	.4445	.4397	.4345
.0080	.4581	.4541	.4501	.4459	.4417	.4372	.4327	.4279	.4231	.4182	.4130
.0090	.4395	.4355	.4314	.4272	.4229	.4184	.4138	.4091	.4042	.3993	.3941
.0100	.4228	.4188	.4147	.4105	.4062	.4016	.3970	.3922	.3874	.3824	.3772
.0200	.3151	.3110	.3070	.3028	.2985	.2941	.2896	.2849	.2801	.2753	.2703
.0300	.2564	.2525	.2487	.2447	.2406	.2364	.2321	.2277	.2232	.2188	.2140
.0400	.2181	.2144	.2107	.2069	.2031	.1991	.1951	.1909	.1868	.1826	.1782
.0500	.1906	.1871	.1836	.1800	.1764	.1726	.1688	.1649	.1610	.1571	.1530
.0600	.1698	.1664	.1631	.1597	.1563	.1527	.1491	.1454	.1417	.1380	.1342
.0700	.1534	.1502	.1470	.1438	.1405	.1371	.1337	.1302	.1267	.1232	.1196
.0800	.1400	.1370	.1340	.1309	.1277	.1245	.1213	.1180	.1146	.1113	.1079
.0900	.1290	.1261	.1232	.1202	.1172	.1141	.1110	.1079	.1047	.1016	.0983
.1000	.1196	.1168	.1141	.1112	.1083	.1054	.1024	.0994	.0964	.0934	.0903

TABLE 82. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9045	.9038	.9031	.9024	.9020	.9016	.9008	.9000	.8991	.8985	.8981	.8971
.0002	.8684	.8675	.8666	.8656	.8650	.8645	.8634	.8623	.8611	.8603	.8598	.8585
.0003	.8419	.8409	.8398	.8387	.8379	.8374	.8361	.8348	.8333	.8324	.8318	.8302
.0004	.8205	.8193	.8181	.8168	.8160	.8154	.8139	.8124	.8108	.8098	.8091	.8074
.0005	.8021	.8009	.7995	.7981	.7972	.7966	.7950	.7934	.7916	.7906	.7898	.7879
.0006	.7860	.7847	.7832	.7817	.7808	.7801	.7784	.7767	.7748	.7736	.7728	.7708
.0007	.7715	.7701	.7686	.7670	.7660	.7653	.7635	.7617	.7597	.7585	.7576	.7554
.0008	.7584	.7569	.7553	.7537	.7526	.7519	.7500	.7481	.7460	.7447	.7438	.7415
.0009	.7463	.7448	.7431	.7414	.7403	.7395	.7376	.7356	.7334	.7321	.7312	.7288
.0010	.7351	.7335	.7318	.7301	.7289	.7281	.7261	.7240	.7217	.7204	.7194	.7170
.0020	.6524	.6504	.6483	.6461	.6447	.6437	.6413	.6387	.6359	.6343	.6331	.6301
.0030	.5970	.5948	.5925	.5901	.5885	.5874	.5847	.5819	.5789	.5771	.5758	.5725
.0040	.5550	.5527	.5503	.5477	.5461	.5449	.5420	.5391	.5358	.5339	.5326	.5291
.0050	.5212	.5188	.5163	.5136	.5119	.5107	.5077	.5047	.5013	.4993	.4979	.4943
.0060	.4930	.4905	.4879	.4852	.4834	.4822	.4791	.4760	.4726	.4705	.4691	.4654
.0070	.4688	.4663	.4636	.4608	.4591	.4578	.4547	.4515	.4480	.4460	.4445	.4408
.0080	.4477	.4451	.4424	.4396	.4378	.4365	.4334	.4302	.4267	.4246	.4231	.4193
.0090	.4289	.4264	.4237	.4208	.4190	.4177	.4146	.4113	.4078	.4057	.4042	.4004
.0100	.4122	.4096	.4069	.4040	.4022	.4009	.3978	.3945	.3909	.3888	.3874	.3835
.0200	.3045	.3019	.2992	.2964	.2947	.2934	.2903	.2871	.2836	.2816	.2801	.2764
.0300	.2463	.2439	.2413	.2386	.2369	.2357	.2328	.2298	.2265	.2246	.2232	.2198
.0400	.2085	.2062	.2037	.2012	.1996	.1985	.1957	.1929	.1898	.1880	.1868	.1835
.0500	.1815	.1793	.1770	.1746	.1731	.1720	.1694	.1668	.1639	.1622	.1610	.1580
.0600	.1611	.1590	.1569	.1546	.1532	.1522	.1497	.1472	.1445	.1429	.1417	.1389
.0700	.1451	.1431	.1411	.1389	.1376	.1366	.1342	.1318	.1293	.1278	.1267	.1240
.0800	.1321	.1302	.1283	.1262	.1249	.1240	.1218	.1195	.1171	.1156	.1146	.1121
.0900	.1214	.1196	.1177	.1158	.1145	.1136	.1115	.1093	.1070	.1057	.1047	.1023
.1000	.1124	.1106	.1088	.1070	.1058	.1049	.1029	.1008	.0986	.0973	.0964	.0941

TABLE 82. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*—Continued

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8961	.8950	.8939	.8927	.8915	.8902	.8889	.8875	.8861	.8847	.8831
.0002	.8571	.8556	.8541	.8525	.8509	.8492	.8475	.8456	.8437	.8418	.8397
.0003	.8286	.8269	.8251	.8233	.8214	.8194	.8173	.8151	.8129	.8106	.8082
.0004	.8055	.8036	.8016	.7996	.7974	.7952	.7929	.7905	.7880	.7855	.7828
.0005	.7859	.7838	.7816	.7794	.7771	.7747	.7722	.7695	.7668	.7641	.7612
.0006	.7686	.7664	.7641	.7617	.7593	.7567	.7540	.7512	.7483	.7454	.7423
.0007	.7532	.7508	.7484	.7459	.7433	.7406	.7378	.7348	.7318	.7287	.7254
.0008	.7392	.7367	.7342	.7316	.7289	.7260	.7231	.7200	.7168	.7136	.7102
.0009	.7264	.7238	.7211	.7184	.7156	.7126	.7096	.7064	.7031	.6998	.6962
.0010	.7145	.7118	.7091	.7062	.7033	.7003	.6971	.6938	.6904	.6870	.6833
.0020	.6270	.6238	.6205	.6170	.6135	.6098	.6060	.6020	.5980	.5938	.5894
.0030	.5691	.5655	.5619	.5582	.5543	.5503	.5461	.5418	.5374	.5329	.5281
.0040	.5255	.5218	.5180	.5140	.5100	.5057	.5014	.4969	.4922	.4875	.4826
.0050	.4907	.4868	.4829	.4788	.4746	.4702	.4658	.4611	.4564	.4516	.4465
.0060	.4617	.4577	.4537	.4496	.4453	.4409	.4363	.4316	.4268	.4219	.4167
.0070	.4370	.4330	.4289	.4247	.4204	.4159	.4113	.4065	.4017	.3967	.3915
.0080	.4155	.4114	.4074	.4031	.3988	.3943	.3897	.3848	.3800	.3750	.3698
.0090	.3966	.3925	.3884	.3841	.3798	.3753	.3706	.3658	.3609	.3560	.3508
.0100	.3797	.3756	.3715	.3672	.3629	.3583	.3537	.3489	.3440	.3391	.3339
.0200	.2727	.2688	.2649	.2608	.2567	.2523	.2480	.2435	.2389	.2344	.2295
.0300	.2163	.2126	.2090	.2052	.2014	.1974	.1934	.1892	.1851	.1809	.1765
.0400	.1803	.1768	.1734	.1699	.1664	.1627	.1590	.1552	.1514	.1476	.1436
.0500	.1549	.1517	.1486	.1453	.1420	.1386	.1352	.1317	.1281	.1246	.1210
.0600	.1360	.1330	.1300	.1270	.1239	.1207	.1176	.1143	.1110	.1078	.1044
.0700	.1213	.1185	.1157	.1128	.1099	.1070	.1040	.1009	.0979	.0948	.0917
.0800	.1095	.1069	.1042	.1015	.0988	.0960	.0932	.0903	.0874	.0846	.0817
.0900	.0998	.0973	.0948	.0922	.0897	.0870	.0844	.0817	.0790	.0763	.0735
.1000	.0918	.0893	.0869	.0845	.0821	.0796	.0770	.0745	.0719	.0694	.0668

TABLE 83. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*
(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8747	.8739	.8730	.8721	.8715	.8710	.8700	.8689	.8677	.8670	.8665	.8652
.0002	.8285	.8274	.8262	.8250	.8242	.8236	.8222	.8208	.8192	.8183	.8176	.8159
.0003	.7950	.7937	.7923	.7909	.7900	.7893	.7877	.7860	.7842	.7831	.7823	.7803
.0004	.7681	.7666	.7651	.7635	.7625	.7618	.7600	.7581	.7561	.7548	.7540	.7518
.0005	.7453	.7437	.7421	.7403	.7392	.7384	.7365	.7345	.7323	.7310	.7301	.7277
.0006	.7254	.7237	.7220	.7201	.7190	.7181	.7161	.7139	.7116	.7102	.7092	.7067
.0007	.7076	.7059	.7041	.7021	.7009	.7000	.6979	.6956	.6932	.6917	.6907	.6880
.0008	.6916	.6898	.6879	.6859	.6846	.6837	.6814	.6791	.6765	.6750	.6740	.6712
.0009	.6770	.6751	.6731	.6710	.6697	.6688	.6664	.6640	.6614	.6598	.6587	.6558
.0010	.6635	.6615	.6595	.6574	.6560	.6550	.6526	.6501	.6474	.6458	.6447	.6417
.0020	.5658	.5635	.5611	.5586	.5570	.5558	.5530	.5500	.5469	.5450	.5436	.5402
.0030	.5027	.5002	.4976	.4949	.4932	.4920	.4890	.4858	.4824	.4804	.4790	.4753
.0040	.4561	.4536	.4509	.4481	.4463	.4451	.4419	.4387	.4352	.4331	.4317	.4279
.0050	.4195	.4169	.4142	.4113	.4095	.4082	.4051	.4018	.3983	.3961	.3947	.3909
.0060	.3894	.3868	.3841	.3812	.3794	.3781	.3749	.3716	.3681	.3660	.3645	.3607
.0070	.3642	.3616	.3588	.3560	.3541	.3528	.3496	.3464	.3428	.3407	.3392	.3354
.0080	.3424	.3398	.3371	.3343	.3324	.3311	.3280	.3247	.3212	.3191	.3176	.3139
.0090	.3235	.3209	.3182	.3154	.3136	.3123	.3091	.3059	.3024	.3003	.2989	.2951
.0100	.3068	.3042	.3015	.2987	.2969	.2956	.2925	.2893	.2859	.2838	.2824	.2787
.0200	.2049	.2026	.2002	.1977	.1961	.1949	.1922	.1894	.1863	.1845	.1833	.1801
.0300	.1544	.1523	.1502	.1480	.1466	.1456	.1432	.1407	.1381	.1365	.1354	.1326
.0400	.1236	.1218	.1199	.1179	.1167	.1158	.1136	.1114	.1091	.1077	.1068	.1043
.0500	.1028	.1011	.0994	.0976	.0965	.0957	.0938	.0918	.0897	.0885	.0876	.0854
.0600	.0877	.0862	.0846	.0830	.0820	.0812	.0795	.0777	.0758	.0747	.0739	.0719
.0700	.0762	.0749	.0734	.0719	.0710	.0703	.0687	.0671	.0654	.0644	.0636	.0618
.0800	.0673	.0660	.0647	.0633	.0625	.0618	.0604	.0589	.0573	.0563	.0557	.0540
.0900	.0601	.0589	.0577	.0564	.0556	.0550	.0537	.0523	.0508	.0500	.0494	.0478
.1000	.0542	.0531	.0520	.0508	.0500	.0495	.0482	.0469	.0456	.0447	.0442	.0428

TABLE 83. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8639	.8625	.8611	.8596	.8580	.8564	.8547	.8529	.8511	.8493	.8473
.0002	.8141	.8123	.8104	.8084	.8063	.8042	.8020	.7997	.7973	.7948	.7922
.0003	.7783	.7761	.7739	.7716	.7692	.7667	.7641	.7614	.7587	.7558	.7528
.0004	.7495	.7471	.7447	.7421	.7395	.7367	.7339	.7309	.7278	.7247	.7214
.0005	.7252	.7226	.7200	.7173	.7144	.7115	.7084	.7052	.7019	.6986	.6950
.0006	.7041	.7013	.6986	.6956	.6927	.6895	.6863	.6829	.6794	.6759	.6721
.0007	.6853	.6824	.6795	.6765	.6733	.6700	.6666	.6631	.6595	.6558	.6518
.0008	.6684	.6654	.6623	.6592	.6559	.6525	.6490	.6453	.6415	.6377	.6336
.0009	.6529	.6498	.6467	.6434	.6401	.6365	.6329	.6291	.6252	.6213	.6170
.0010	.6387	.6355	.6323	.6289	.6255	.6218	.6181	.6142	.6102	.6062	.6018
.0020	.5367	.5330	.5292	.5253	.5213	.5171	.5128	.5083	.5038	.4991	.4942
.0030	.4716	.4677	.4637	.4596	.4554	.4509	.4464	.4417	.4369	.4320	.4269
.0040	.4241	.4201	.4160	.4118	.4075	.4029	.3983	.3935	.3887	.3837	.3785
.0050	.3870	.3829	.3788	.3746	.3702	.3657	.3611	.3562	.3514	.3464	.3412
.0060	.3568	.3528	.3487	.3444	.3401	.3355	.3309	.3262	.3213	.3164	.3112
.0070	.3316	.3275	.3235	.3192	.3149	.3104	.3059	.3011	.2964	.2915	.2864
.0080	.3101	.3060	.3020	.2978	.2935	.2891	.2846	.2799	.2752	.2705	.2654
.0090	.2914	.2874	.2834	.2792	.2751	.2707	.2662	.2616	.2570	.2523	.2474
.0100	.2749	.2710	.2671	.2630	.2588	.2545	.2502	.2456	.2411	.2365	.2317
.0200	.1769	.1735	.1701	.1666	.1631	.1595	.1558	.1520	.1483	.1445	.1405
.0300	.1298	.1269	.1240	.1210	.1180	.1149	.1118	.1086	.1055	.1023	.0990
.0400	.1018	.0993	.0967	.0941	.0915	.0888	.0862	.0834	.0807	.0780	.0752
.0500	.0832	.0809	.0787	.0764	.0741	.0717	.0694	.0670	.0646	.0623	.0598
.0600	.0700	.0679	.0659	.0638	.0618	.0597	.0576	.0555	.0534	.0513	.0492
.0700	.0601	.0582	.0564	.0545	.0527	.0508	.0489	.0470	.0451	.0433	.0414
.0800	.0524	.0507	.0490	.0473	.0457	.0439	.0422	.0405	.0388	.0371	.0354
.0900	.0463	.0448	.0432	.0417	.0401	.0386	.0370	.0354	.0339	.0324	.0308
.1000	.0414	.0399	.0385	.0371	.0357	.0342	.0328	.0313	.0299	.0285	.0271

TABLE 84. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*
(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8365	.8355	.8343	.8332	.8324	.8319	.8305	.8291	.8276	.8267	.8261	.8245
.0002	.7781	.7767	.7752	.7737	.7727	.7720	.7703	.7685	.7665	.7653	.7645	.7624
.0003	.7365	.7349	.7332	.7314	.7303	.7295	.7275	.7254	.7231	.7218	.7208	.7184
.0004	.7034	.7016	.6998	.6978	.6966	.6957	.6935	.6912	.6888	.6873	.6863	.6836
.0005	.6757	.6738	.6718	.6698	.6684	.6675	.6651	.6627	.6601	.6585	.6574	.6545
.0006	.6518	.6498	.6477	.6455	.6441	.6431	.6406	.6381	.6353	.6336	.6325	.6295
.0007	.6306	.6285	.6264	.6241	.6226	.6216	.6190	.6163	.6135	.6117	.6105	.6074
.0008	.6116	.6095	.6073	.6049	.6034	.6023	.5997	.5969	.5939	.5921	.5909	.5877
.0009	.5944	.5922	.5899	.5875	.5859	.5848	.5821	.5793	.5762	.5744	.5731	.5698
.0010	.5787	.5764	.5741	.5716	.5700	.5688	.5661	.5632	.5601	.5582	.5569	.5535
.0020	.4680	.4654	.4628	.4600	.4582	.4570	.4539	.4507	.4472	.4451	.4437	.4399
.0030	.3997	.3971	.3944	.3915	.3897	.3884	.3852	.3819	.3784	.3763	.3748	.3710
.0040	.3511	.3485	.3458	.3429	.3411	.3398	.3366	.3334	.3298	.3277	.3263	.3225
.0050	.3140	.3114	.3087	.3059	.3041	.3028	.2997	.2965	.2930	.2909	.2895	.2858
.0060	.2844	.2819	.2792	.2764	.2747	.2734	.2704	.2672	.2638	.2618	.2604	.2568
.0070	.2601	.2576	.2550	.2523	.2505	.2493	.2463	.2432	.2399	.2380	.2366	.2331
.0080	.2396	.2372	.2346	.2320	.2303	.2291	.2262	.2232	.2200	.2181	.2167	.2133
.0090	.2221	.2197	.2172	.2147	.2130	.2119	.2090	.2061	.2030	.2011	.1998	.1965
.0100	.2069	.2046	.2022	.1997	.1981	.1969	.1942	.1913	.1883	.1865	.1852	.1820
.0200	.1208	.1190	.1171	.1151	.1139	.1130	.1109	.1087	.1064	.1051	.1041	.1017
.0300	.0828	.0814	.0799	.0783	.0773	.0766	.0749	.0732	.0714	.0703	.0695	.0676
.0400	.0616	.0604	.0591	.0578	.0570	.0564	.0550	.0536	.0521	.0512	.0506	.0491
.0500	.0481	.0471	.0460	.0449	.0443	.0438	.0426	.0414	.0401	.0394	.0389	.0376
.0600	.0389	.0381	.0371	.0362	.0356	.0352	.0342	.0332	.0321	.0314	.0310	.0299
.0700	.0323	.0315	.0307	.0299	.0294	.0290	.0282	.0273	.0263	.0258	.0254	.0245
.0800	.0274	.0267	.0260	.0252	.0248	.0245	.0237	.0229	.0221	.0216	.0213	.0204
.0900	.0235	.0229	.0223	.0216	.0212	.0209	.0203	.0196	.0188	.0184	.0181	.0174
.1000	.0205	.0200	.0194	.0188	.0184	.0182	.0176	.0169	.0163	.0159	.0156	.0150

TABLE 84. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Scatchard*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8228	.8210	.8192	.8173	.8153	.8133	.8111	.8089	.8066	.8043	.8018
.0002	.7602	.7579	.7555	.7531	.7505	.7478	.7451	.7422	.7393	.7363	.7330
.0003	.7159	.7132	.7105	.7077	.7048	.7017	.6986	.6953	.6919	.6885	.6848
.0004	.6808	.6779	.6750	.6719	.6687	.6654	.6620	.6584	.6547	.6510	.6470
.0005	.6516	.6485	.6453	.6421	.6387	.6351	.6315	.6277	.6238	.6198	.6156
.0006	.6264	.6231	.6198	.6164	.6129	.6091	.6053	.6013	.5973	.5931	.5887
.0007	.6042	.6008	.5974	.5938	.5902	.5863	.5824	.5782	.5740	.5697	.5651
.0008	.5844	.5809	.5774	.5737	.5699	.5659	.5619	.5576	.5533	.5489	.5442
.0009	.5664	.5629	.5592	.5555	.5516	.5475	.5434	.5390	.5346	.5301	.5253
.0010	.5501	.5464	.5427	.5389	.5349	.5308	.5265	.5221	.5176	.5130	.5081
.0020	.4362	.4321	.4281	.4239	.4196	.4151	.4105	.4057	.4008	.3959	.3907
.0030	.3671	.3630	.3589	.3547	.3503	.3458	.3412	.3364	.3315	.3266	.3214
.0040	.3186	.3146	.3105	.3063	.3021	.2976	.2931	.2884	.2836	.2788	.2738
.0050	.2820	.2781	.2741	.2700	.2658	.2615	.2571	.2525	.2479	.2433	.2384
.0060	.2531	.2493	.2454	.2414	.2374	.2332	.2289	.2245	.2201	.2156	.2109
.0070	.2295	.2258	.2220	.2182	.2143	.2102	.2061	.2019	.1976	.1933	.1888
.0080	.2099	.2062	.2026	.1989	.1951	.1912	.1872	.1831	.1790	.1749	.1706
.0090	.1932	.1896	.1861	.1825	.1789	.1751	.1713	.1673	.1634	.1594	.1553
.0100	.1788	.1754	.1720	.1685	.1650	.1613	.1576	.1538	.1500	.1462	.1423
.0200	.0993	.0967	.0942	.0917	.0891	.0865	.0838	.0811	.0785	.0758	.0731
.0300	.0657	.0638	.0618	.0599	.0579	.0559	.0539	.0518	.0498	.0479	.0458
.0400	.0476	.0460	.0444	.0428	.0412	.0396	.0381	.0365	.0349	.0333	.0317
.0500	.0363	.0350	.0337	.0324	.0311	.0298	.0285	.0272	.0259	.0247	.0234
.0600	.0288	.0277	.0266	.0255	.0244	.0233	.0222	.0212	.0201	.0191	.0180
.0700	.0235	.0226	.0216	.0207	.0197	.0188	.0179	.0170	.0161	.0152	.0143
.0800	.0196	.0188	.0179	.0171	.0163	.0155	.0147	.0139	.0131	.0124	.0116
.0900	.0166	.0159	.0152	.0144	.0137	.0130	.0123	.0116	.0110	.0103	.0097
.1000	.0143	.0137	.0130	.0124	.0117	.0111	.0105	.0099	.0093	.0087	.0081

TABLE 85. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_-=1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881
.0002	.9844	.9843	.9842	.9841	.9840	.9840	.9838	.9837	.9836	.9835	.9834	.9833
.0003	.9811	.9809	.9808	.9806	.9806	.9805	.9803	.9802	.9800	.9799	.9798	.9796
.0004	.9783	.9781	.9779	.9778	.9777	.9776	.9774	.9772	.9770	.9769	.9768	.9766
.0005	.9758	.9756	.9755	.9753	.9752	.9751	.9749	.9747	.9744	.9743	.9742	.9740
.0006	.9736	.9734	.9732	.9730	.9729	.9728	.9726	.9724	.9721	.9720	.9719	.9716
.0007	.9716	.9714	.9712	.9710	.9708	.9707	.9705	.9703	.9700	.9699	.9697	.9695
.0008	.9697	.9695	.9693	.9691	.9689	.9688	.9686	.9683	.9681	.9679	.9678	.9675
.0009	.9680	.9678	.9676	.9673	.9672	.9671	.9668	.9665	.9662	.9661	.9659	.9656
.0010	.9664	.9662	.9659	.9657	.9655	.9654	.9651	.9648	.9645	.9643	.9642	.9639
.0020	.9536	.9533	.9530	.9526	.9524	.9523	.9519	.9515	.9511	.9508	.9507	.9502
.0030	.9443	.9439	.9435	.9431	.9428	.9427	.9422	.9417	.9412	.9409	.9407	.9402
.0040	.9367	.9362	.9358	.9353	.9350	.9348	.9343	.9338	.9332	.9329	.9326	.9320
.0050	.9302	.9297	.9292	.9287	.9284	.9281	.9276	.9270	.9264	.9260	.9257	.9251
.0060	.9244	.9239	.9234	.9228	.9225	.9222	.9216	.9210	.9203	.9199	.9196	.9189
.0070	.9193	.9187	.9181	.9176	.9172	.9169	.9163	.9156	.9149	.9145	.9142	.9134
.0080	.9146	.9140	.9134	.9128	.9124	.9121	.9114	.9107	.9100	.9095	.9092	.9084
.0090	.9102	.9096	.9090	.9083	.9079	.9077	.9069	.9062	.9054	.9049	.9046	.9038
.0100	.9062	.9056	.9049	.9042	.9038	.9035	.9028	.9020	.9012	.9007	.9003	.8995
.0200	.8762	.8754	.8746	.8737	.8731	.8727	.8718	.8708	.8697	.8691	.8686	.8675
.0300	.8558	.8549	.8539	.8529	.8523	.8518	.8507	.8495	.8483	.8476	.8471	.8458
.0400	.8401	.8391	.8380	.8369	.8362	.8357	.8345	.8332	.8319	.8311	.8305	.8291
.0500	.8273	.8262	.8250	.8238	.8231	.8225	.8212	.8199	.8185	.8176	.8170	.8154
.0600	.8164	.8152	.8140	.8127	.8120	.8114	.8100	.8086	.8071	.8062	.8055	.8039
.0700	.8070	.8057	.8045	.8031	.8023	.8017	.8003	.7988	.7972	.7963	.7956	.7939
.0800	.7986	.7973	.7960	.7946	.7938	.7932	.7917	.7901	.7885	.7875	.7868	.7851
.0900	.7911	.7898	.7885	.7870	.7862	.7855	.7840	.7824	.7807	.7797	.7790	.7772
.1000	.7844	.7830	.7816	.7801	.7793	.7786	.7770	.7754	.7737	.7726	.7719	.7700

TABLE 85. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9880	.9878	.9877	.9876	.9875	.9873	.9872	.9870	.9869	.9867	.9866
.0002	.9831	.9829	.9828	.9826	.9824	.9822	.9820	.9818	.9816	.9814	.9812
.0003	.9794	.9792	.9790	.9788	.9786	.9784	.9781	.9779	.9776	.9774	.9771
.0004	.9764	.9762	.9759	.9757	.9754	.9752	.9749	.9746	.9743	.9740	.9737
.0005	.9737	.9735	.9732	.9729	.9727	.9724	.9721	.9718	.9714	.9711	.9708
.0006	.9714	.9711	.9708	.9705	.9702	.9699	.9695	.9692	.9688	.9685	.9681
.0007	.9692	.9689	.9686	.9683	.9679	.9676	.9672	.9669	.9665	.9661	.9657
.0008	.9672	.9669	.9665	.9662	.9658	.9655	.9651	.9647	.9643	.9639	.9635
.0009	.9653	.9650	.9646	.9643	.9639	.9635	.9631	.9627	.9623	.9618	.9614
.0010	.9635	.9632	.9628	.9625	.9621	.9617	.9613	.9608	.9604	.9599	.9594
.0020	.9498	.9493	.9488	.9483	.9477	.9472	.9466	.9460	.9454	.9448	.9441
.0030	.9396	.9391	.9385	.9379	.9372	.9366	.9359	.9352	.9345	.9337	.9329
.0040	.9314	.9308	.9301	.9294	.9287	.9279	.9272	.9264	.9255	.9247	.9238
.0050	.9244	.9237	.9229	.9222	.9214	.9206	.9197	.9188	.9179	.9170	.9160
.0060	.9182	.9174	.9166	.9158	.9149	.9141	.9132	.9122	.9112	.9102	.9092
.0070	.9126	.9118	.9109	.9101	.9092	.9082	.9073	.9063	.9052	.9042	.9030
.0080	.9076	.9067	.9058	.9049	.9039	.9029	.9019	.9009	.8998	.8986	.8974
.0090	.9029	.9020	.9010	.9001	.8991	.8981	.8970	.8959	.8947	.8935	.8923
.0100	.8986	.8976	.8966	.8956	.8946	.8935	.8924	.8913	.8901	.8888	.8875
.0200	.8663	.8651	.8638	.8625	.8612	.8598	.8584	.8569	.8553	.8537	.8521
.0300	.8444	.8430	.8416	.8401	.8385	.8369	.8353	.8336	.8318	.8300	.8281
.0400	.8276	.8260	.8245	.8228	.8211	.8194	.8176	.8157	.8138	.8118	.8097
.0500	.8139	.8122	.8105	.8088	.8070	.8051	.8032	.8012	.7991	.7970	.7947
.0600	.8022	.8005	.7987	.7969	.7950	.7930	.7910	.7889	.7867	.7844	.7821
.0700	.7922	.7903	.7885	.7866	.7846	.7825	.7804	.7782	.7759	.7736	.7711
.0800	.7833	.7814	.7795	.7775	.7754	.7733	.7711	.7688	.7664	.7640	.7615
.0900	.7753	.7734	.7714	.7693	.7672	.7650	.7627	.7604	.7580	.7555	.7529
.1000	.7681	.7661	.7641	.7619	.7598	.7575	.7552	.7528	.7503	.7477	.7451

TABLE 86. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9778	.9776	.9775	.9773	.9773	.9771	.9769	.9767	.9766	.9765	.9763
.0002	.9691	.9689	.9687	.9684	.9683	.9682	.9679	.9677	.9674	.9672	.9671	.9668
.0003	.9625	.9622	.9620	.9617	.9615	.9614	.9611	.9607	.9604	.9602	.9601	.9597
.0004	.9570	.9567	.9564	.9560	.9558	.9557	.9554	.9550	.9546	.9544	.9542	.9538
.0005	.9522	.9518	.9515	.9511	.9509	.9508	.9504	.9500	.9495	.9493	.9491	.9486
.0006	.9479	.9475	.9472	.9468	.9465	.9464	.9459	.9455	.9450	.9447	.9445	.9440
.0007	.9440	.9436	.9432	.9428	.9425	.9423	.9419	.9414	.9409	.9406	.9404	.9399
.0008	.9404	.9400	.9396	.9391	.9388	.9386	.9382	.9377	.9371	.9368	.9366	.9360
.0009	.9370	.9366	.9362	.9357	.9354	.9352	.9347	.9342	.9336	.9333	.9330	.9324
.0010	.9339	.9335	.9330	.9325	.9322	.9320	.9314	.9309	.9303	.9299	.9297	.9291
.0020	.9094	.9088	.9082	.9075	.9071	.9068	.9061	.9054	.9046	.9041	.9038	.9029
.0030	.8917	.8910	.8902	.8894	.8890	.8886	.8878	.8869	.8859	.8854	.8850	.8840
.0040	.8774	.8766	.8757	.8748	.8743	.8739	.8729	.8719	.8709	.8703	.8698	.8687
.0050	.8652	.8643	.8634	.8624	.8618	.8614	.8604	.8593	.8582	.8574	.8570	.8557
.0060	.8546	.8536	.8526	.8516	.8510	.8505	.8494	.8482	.8470	.8462	.8457	.8444
.0070	.8450	.8440	.8430	.8419	.8412	.8408	.8396	.8383	.8370	.8362	.8357	.8343
.0080	.8364	.8354	.8343	.8331	.8324	.8319	.8307	.8294	.8280	.8272	.8266	.8251
.0090	.8285	.8274	.8263	.8251	.8244	.8238	.8225	.8212	.8198	.8189	.8183	.8168
.0100	.8212	.8201	.8189	.8177	.8169	.8164	.8150	.8136	.8121	.8112	.8106	.8090
.0200	.7678	.7663	.7649	.7633	.7624	.7617	.7600	.7582	.7564	.7553	.7545	.7525
.0300	.7324	.7308	.7292	.7274	.7263	.7256	.7237	.7217	.7197	.7184	.7175	.7153
.0400	.7058	.7040	.7023	.7004	.6992	.6984	.6964	.6942	.6920	.6907	.6897	.6873
.0500	.6844	.6825	.6807	.6787	.6775	.6766	.6744	.6722	.6699	.6684	.6674	.6649
.0600	.6665	.6646	.6626	.6605	.6593	.6584	.6561	.6538	.6514	.6499	.6489	.6463
.0700	.6512	.6492	.6472	.6450	.6437	.6428	.6405	.6381	.6356	.6340	.6330	.6303
.0800	.6378	.6357	.6336	.6314	.6301	.6291	.6268	.6243	.6218	.6202	.6191	.6163
.0900	.6259	.6238	.6217	.6194	.6181	.6171	.6147	.6121	.6095	.6079	.6068	.6040
.1000	.6152	.6131	.6109	.6086	.6073	.6062	.6038	.6012	.5986	.5969	.5958	.5929

TABLE 86. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*—Continued

(Electrolyte, $z_+z_-=2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9761	.9758	.9756	.9753	.9751	.9748	.9745	.9742	.9740	.9736	.9733
.0002	.9665	.9662	.9658	.9655	.9651	.9648	.9644	.9640	.9636	.9632	.9627
.0003	.9593	.9589	.9585	.9581	.9577	.9572	.9568	.9563	.9558	.9553	.9547
.0004	.9534	.9529	.9524	.9520	.9515	.9510	.9504	.9499	.9493	.9487	.9481
.0005	.9482	.9477	.9472	.9466	.9461	.9455	.9449	.9443	.9437	.9430	.9424
.0006	.9435	.9430	.9424	.9419	.9413	.9407	.9400	.9394	.9387	.9380	.9372
.0007	.9393	.9387	.9381	.9375	.9369	.9362	.9355	.9348	.9341	.9333	.9325
.0008	.9354	.9348	.9342	.9335	.9328	.9322	.9314	.9307	.9299	.9291	.9282
.0009	.9318	.9312	.9305	.9298	.9291	.9284	.9276	.9268	.9260	.9251	.9242
.0010	.9284	.9277	.9270	.9263	.9256	.9248	.9240	.9232	.9223	.9214	.9205
.0020	.9020	.9011	.9002	.8992	.8982	.8972	.8961	.8950	.8938	.8926	.8914
.0030	.8829	.8818	.8807	.8796	.8784	.8772	.8759	.8746	.8732	.8718	.8703
.0040	.8675	.8663	.8651	.8638	.8624	.8611	.8596	.8582	.8566	.8551	.8534
.0050	.8545	.8531	.8518	.8504	.8489	.8474	.8459	.8443	.8426	.8409	.8391
.0060	.8431	.8416	.8402	.8387	.8371	.8355	.8339	.8321	.8304	.8285	.8266
.0070	.8329	.8314	.8298	.8282	.8266	.8249	.8232	.8213	.8194	.8175	.8155
.0080	.8237	.8221	.8205	.8188	.8171	.8153	.8135	.8115	.8096	.8075	.8054
.0090	.8152	.8136	.8119	.8101	.8083	.8065	.8046	.8026	.8005	.7984	.7962
.0100	.8074	.8057	.8040	.8022	.8003	.7984	.7964	.7943	.7922	.7900	.7877
.0200	.7505	.7484	.7462	.7440	.7416	.7392	.7368	.7342	.7316	.7289	.7260
.0300	.7130	.7106	.7082	.7057	.7031	.7005	.6977	.6949	.6919	.6889	.6857
.0400	.6849	.6823	.6797	.6770	.6743	.6714	.6685	.6654	.6622	.6590	.6556
.0500	.6624	.6597	.6569	.6541	.6512	.6482	.6451	.6419	.6386	.6352	.6316
.0600	.6436	.6408	.6379	.6350	.6320	.6289	.6256	.6223	.6189	.6154	.6117
.0700	.6275	.6246	.6217	.6187	.6156	.6123	.6090	.6056	.6021	.5985	.5947
.0800	.6135	.6106	.6075	.6044	.6012	.5980	.5946	.5910	.5874	.5837	.5799
.0900	.6011	.5981	.5950	.5918	.5886	.5852	.5818	.5782	.5745	.5707	.5668
.1000	.5900	.5869	.5838	.5806	.5772	.5738	.5703	.5667	.5629	.5591	.5551

TABLE 87. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9671	.9669	.9666	.9664	.9662	.9661	.9658	.9656	.9653	.9651	.9649	.9646
.0002	.9540	.9537	.9534	.9530	.9528	.9527	.9523	.9519	.9515	.9513	.9511	.9506
.0003	.9443	.9439	.9435	.9431	.9428	.9426	.9422	.9417	.9412	.9409	.9407	.9402
.0004	.9362	.9357	.9353	.9348	.9345	.9343	.9338	.9332	.9327	.9323	.9321	.9315
.0005	.9291	.9287	.9282	.9276	.9273	.9271	.9265	.9259	.9253	.9249	.9246	.9240
.0006	.9229	.9223	.9218	.9212	.9209	.9206	.9200	.9194	.9187	.9183	.9180	.9173
.0007	.9172	.9166	.9160	.9154	.9151	.9148	.9141	.9134	.9127	.9123	.9120	.9112
.0008	.9119	.9113	.9107	.9101	.9097	.9094	.9087	.9080	.9072	.9067	.9064	.9056
.0009	.9071	.9064	.9058	.9051	.9047	.9044	.9037	.9029	.9021	.9016	.9012	.9004
.0010	.9025	.9019	.9012	.9005	.9000	.8997	.8990	.8981	.8973	.8968	.8964	.8955
.0020	.8673	.8664	.8655	.8646	.8640	.8636	.8625	.8615	.8603	.8596	.8592	.8580
.0030	.8420	.8410	.8399	.8388	.8381	.8376	.8364	.8352	.8339	.8331	.8325	.8311
.0040	.8218	.8207	.8195	.8182	.8175	.8169	.8156	.8142	.8127	.8118	.8112	.8096
.0050	.8048	.8035	.8023	.8009	.8001	.7995	.7981	.7965	.7950	.7940	.7933	.7916
.0060	.7900	.7886	.7873	.7859	.7850	.7844	.7828	.7812	.7795	.7785	.7778	.7759
.0070	.7768	.7754	.7740	.7725	.7716	.7709	.7693	.7676	.7658	.7647	.7640	.7620
.0080	.7650	.7635	.7620	.7604	.7595	.7588	.7571	.7553	.7535	.7523	.7515	.7495
.0090	.7542	.7527	.7511	.7495	.7485	.7477	.7460	.7442	.7422	.7410	.7402	.7382
.0100	.7442	.7427	.7411	.7394	.7383	.7376	.7358	.7339	.7319	.7307	.7298	.7277
.0200	.6728	.6709	.6689	.6669	.6656	.6647	.6625	.6602	.6579	.6564	.6554	.6528
.0300	.6268	.6248	.6226	.6204	.6190	.6180	.6156	.6131	.6105	.6089	.6078	.6050
.0400	.5929	.5907	.5885	.5861	.5847	.5836	.5811	.5784	.5757	.5740	.5728	.5698
.0500	.5662	.5639	.5615	.5591	.5576	.5565	.5539	.5511	.5483	.5465	.5453	.5422
.0600	.5441	.5418	.5394	.5368	.5353	.5342	.5315	.5287	.5257	.5239	.5227	.5195
.0700	.5255	.5231	.5206	.5180	.5165	.5153	.5126	.5097	.5067	.5048	.5036	.5004
.0800	.5093	.5069	.5044	.5018	.5002	.4990	.4962	.4933	.4903	.4884	.4871	.4839
.0900	.4952	.4927	.4902	.4875	.4859	.4847	.4819	.4789	.4759	.4740	.4727	.4694
.1000	.4826	.4801	.4775	.4748	.4732	.4720	.4692	.4662	.4631	.4612	.4599	.4565

TABLE 87. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*—Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9643	.9639	.9636	.9632	.9628	.9625	.9620	.9616	.9612	.9607	.9603
.0002	.9502	.9497	.9492	.9487	.9482	.9476	.9471	.9465	.9459	.9452	.9446
.0003	.9396	.9390	.9384	.9378	.9372	.9365	.9359	.9351	.9344	.9337	.9329
.0004	.9309	.9302	.9295	.9288	.9281	.9274	.9266	.9258	.9249	.9241	.9232
.0005	.9233	.9225	.9218	.9210	.9202	.9194	.9185	.9177	.9167	.9158	.9148
.0006	.9165	.9157	.9149	.9141	.9132	.9123	.9114	.9104	.9094	.9084	.9073
.0007	.9104	.9095	.9087	.9078	.9068	.9059	.9049	.9039	.9028	.9017	.9005
.0008	.9047	.9038	.9029	.9020	.9010	.9000	.8989	.8978	.8967	.8955	.8943
.0009	.8995	.8985	.8976	.8966	.8955	.8945	.8934	.8922	.8910	.8898	.8885
.0010	.8946	.8936	.8926	.8915	.8905	.8893	.8882	.8870	.8858	.8845	.8831
.0020	.8567	.8554	.8541	.8527	.8512	.8498	.8482	.8467	.8450	.8433	.8415
.0030	.8296	.8281	.8265	.8249	.8232	.8215	.8197	.8179	.8160	.8140	.8119
.0040	.8080	.8063	.8046	.8028	.8009	.7990	.7970	.7950	.7929	.7907	.7884
.0050	.7899	.7880	.7861	.7842	.7822	.7801	.7780	.7757	.7735	.7711	.7686
.0060	.7741	.7721	.7701	.7681	.7659	.7637	.7615	.7591	.7567	.7542	.7515
.0070	.7601	.7580	.7559	.7538	.7515	.7492	.7468	.7443	.7418	.7392	.7364
.0080	.7475	.7454	.7432	.7409	.7386	.7362	.7337	.7311	.7284	.7257	.7228
.0090	.7360	.7338	.7315	.7292	.7268	.7243	.7217	.7190	.7163	.7134	.7104
.0100	.7255	.7232	.7209	.7184	.7159	.7134	.7107	.7079	.7051	.7022	.6991
.0200	.6502	.6474	.6446	.6417	.6387	.6356	.6324	.6291	.6257	.6223	.6186
.0300	.6021	.5991	.5960	.5928	.5896	.5862	.5828	.5792	.5755	.5718	.5678
.0400	.5668	.5636	.5604	.5571	.5537	.5501	.5465	.5428	.5389	.5350	.5308
.0500	.5391	.5358	.5325	.5290	.5255	.5218	.5181	.5142	.5103	.5062	.5019
.0600	.5163	.5130	.5095	.5060	.5024	.4987	.4949	.4909	.4869	.4827	.4784
.0700	.4971	.4937	.4902	.4866	.4829	.4792	.4753	.4713	.4672	.4630	.4586
.0800	.4806	.4771	.4736	.4699	.4662	.4624	.4585	.4544	.4502	.4460	.4416
.0900	.4660	.4625	.4590	.4553	.4516	.4477	.4437	.4396	.4355	.4312	.4267
.1000	.4532	.4496	.4460	.4424	.4386	.4347	.4307	.4266	.4224	.4181	.4136

TABLE 88. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9564	.9561	.9557	.9554	.9552	.9551	.9547	.9543	.9539	.9537	.9535	.9531
.0002	.9392	.9388	.9383	.9379	.9376	.9374	.9369	.9364	.9359	.9355	.9353	.9347
.0003	.9264	.9259	.9254	.9248	.9245	.9242	.9236	.9230	.9224	.9220	.9217	.9210
.0004	.9158	.9152	.9146	.9140	.9136	.9134	.9127	.9120	.9113	.9108	.9105	.9097
.0005	.9066	.9060	.9054	.9047	.9043	.9040	.9032	.9025	.9016	.9011	.9008	.8999
.0006	.8985	.8978	.8971	.8964	.8959	.8956	.8948	.8940	.8931	.8925	.8922	.8912
.0007	.8911	.8904	.8896	.8889	.8884	.8880	.8872	.8863	.8853	.8848	.8844	.8833
.0008	.8843	.8836	.8828	.8819	.8814	.8811	.8802	.8792	.8782	.8776	.8772	.8761
.0009	.8781	.8773	.8764	.8755	.8750	.8746	.8737	.8727	.8716	.8710	.8705	.8694
.0010	.8722	.8713	.8705	.8695	.8690	.8686	.8676	.8666	.8655	.8648	.8643	.8632
.0020	.8271	.8260	.8248	.8236	.8229	.8224	.8210	.8197	.8183	.8174	.8168	.8152
.0030	.7951	.7938	.7925	.7911	.7902	.7896	.7881	.7865	.7849	.7839	.7832	.7814
.0040	.7698	.7683	.7669	.7653	.7644	.7637	.7620	.7603	.7585	.7573	.7566	.7546
.0050	.7486	.7470	.7455	.7438	.7428	.7420	.7403	.7384	.7364	.7352	.7344	.7323
.0060	.7303	.7286	.7270	.7252	.7241	.7233	.7215	.7195	.7174	.7161	.7153	.7130
.0070	.7141	.7124	.7106	.7088	.7077	.7069	.7049	.7028	.7006	.6993	.6984	.6961
.0080	.6996	.6978	.6960	.6941	.6929	.6921	.6900	.6879	.6856	.6842	.6833	.6809
.0090	.6865	.6846	.6828	.6808	.6796	.6787	.6766	.6743	.6720	.6706	.6696	.6671
.0100	.6744	.6725	.6706	.6686	.6673	.6664	.6642	.6620	.6596	.6581	.6571	.6545
.0200	.5895	.5873	.5850	.5826	.5812	.5801	.5776	.5749	.5721	.5704	.5693	.5663
.0300	.5365	.5341	.5317	.5291	.5276	.5264	.5237	.5209	.5179	.5161	.5148	.5116
.0400	.4981	.4957	.4932	.4905	.4889	.4877	.4849	.4820	.4789	.4770	.4757	.4724
.0500	.4684	.4659	.4633	.4606	.4589	.4577	.4549	.4519	.4487	.4468	.4455	.4421
.0600	.4442	.4417	.4391	.4363	.4347	.4334	.4305	.4275	.4243	.4224	.4210	.4177
.0700	.4240	.4215	.4188	.4160	.4144	.4132	.4102	.4071	.4040	.4020	.4007	.3973
.0800	.4068	.4042	.4015	.3987	.3971	.3958	.3929	.3898	.3866	.3846	.3833	.3799
.0900	.3917	.3891	.3865	.3837	.3820	.3808	.3778	.3747	.3715	.3695	.3682	.3648
.1000	.3785	.3759	.3732	.3704	.3688	.3675	.3646	.3615	.3583	.3563	.3550	.3515

TABLE 88. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9527	.9522	.9518	.9513	.9508	.9503	.9497	.9492	.9486	.9480	.9474
.0002	.9341	.9335	.9329	.9322	.9315	.9308	.9301	.9293	.9285	.9277	.9268
.0003	.9203	.9195	.9188	.9180	.9171	.9163	.9154	.9145	.9135	.9125	.9115
.0004	.9089	.9080	.9071	.9062	.9053	.9043	.9033	.9023	.9012	.9001	.8989
.0005	.8990	.8981	.8971	.8961	.8951	.8940	.8929	.8917	.8906	.8893	.8880
.0006	.8903	.8892	.8882	.8871	.8860	.8848	.8836	.8824	.8811	.8798	.8784
.0007	.8823	.8812	.8801	.8790	.8778	.8765	.8753	.8739	.8725	.8711	.8696
.0008	.8750	.8739	.8727	.8715	.8702	.8689	.8676	.8662	.8647	.8632	.8616
.0009	.8683	.8671	.8658	.8645	.8632	.8618	.8604	.8590	.8574	.8559	.8542
.0010	.8620	.8607	.8594	.8581	.8567	.8553	.8538	.8522	.8507	.8490	.8473
.0020	.8137	.8120	.8103	.8086	.8068	.8049	.8030	.8010	.7989	.7968	.7945
.0030	.7796	.7776	.7757	.7737	.7716	.7694	.7672	.7649	.7625	.7600	.7575
.0040	.7526	.7505	.7483	.7461	.7438	.7414	.7390	.7364	.7338	.7311	.7283
.0050	.7301	.7278	.7255	.7231	.7207	.7181	.7155	.7128	.7100	.7071	.7041
.0060	.7107	.7083	.7059	.7034	.7008	.6981	.6953	.6924	.6895	.6865	.6833
.0070	.6937	.6912	.6886	.6860	.6833	.6805	.6776	.6746	.6715	.6683	.6650
.0080	.6784	.6758	.6732	.6704	.6676	.6647	.6617	.6586	.6554	.6521	.6487
.0090	.6646	.6619	.6591	.6563	.6534	.6504	.6474	.6441	.6409	.6375	.6339
.0100	.6519	.6492	.6464	.6435	.6405	.6374	.6343	.6310	.6276	.6241	.6205
.0200	.5632	.5600	.5568	.5535	.5500	.5465	.5429	.5391	.5352	.5313	.5271
.0300	.5084	.5050	.5016	.4980	.4944	.4906	.4868	.4828	.4787	.4746	.4702
.0400	.4691	.4656	.4620	.4584	.4546	.4508	.4468	.4427	.4386	.4343	.4298
.0500	.4387	.4352	.4316	.4278	.4240	.4201	.4161	.4120	.4077	.4034	.3989
.0600	.4142	.4106	.4070	.4032	.3994	.3955	.3914	.3873	.3830	.3787	.3741
.0700	.3938	.3902	.3865	.3828	.3789	.3750	.3709	.3667	.3625	.3581	.3536
.0800	.3764	.3728	.3691	.3653	.3615	.3575	.3535	.3493	.3451	.3408	.3362
.0900	.3613	.3577	.3540	.3503	.3464	.3425	.3385	.3343	.3301	.3257	.3212
.1000	.3481	.3445	.3408	.3371	.3332	.3293	.3253	.3211	.3169	.3126	.3081

TABLE 89. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9353	.9348	.9343	.9339	.9336	.9334	.9328	.9323	.9317	.9314	.9311	.9305
.0002	.9102	.9096	.9090	.9083	.9079	.9076	.9069	.9062	.9054	.9049	.9046	.9037
.0003	.8916	.8909	.8902	.8894	.8889	.8885	.8877	.8868	.8859	.8853	.8849	.8839
.0004	.8764	.8756	.8747	.8738	.8733	.8729	.8719	.8709	.8699	.8692	.8688	.8677
.0005	.8633	.8624	.8615	.8605	.8599	.8595	.8584	.8573	.8562	.8554	.8549	.8537
.0006	.8517	.8507	.8497	.8487	.8480	.8476	.8464	.8452	.8440	.8432	.8427	.8414
.0007	.8412	.8402	.8391	.8380	.8373	.8368	.8356	.8344	.8330	.8322	.8317	.8302
.0008	.8316	.8306	.8294	.8282	.8275	.8270	.8257	.8244	.8230	.8222	.8216	.8201
.0009	.8228	.8216	.8205	.8192	.8185	.8179	.8166	.8152	.8138	.8129	.8123	.8107
.0010	.8145	.8134	.8121	.8108	.8101	.8095	.8081	.8067	.8052	.8042	.8036	.8019
.0020	.7522	.7507	.7491	.7475	.7465	.7457	.7440	.7421	.7402	.7390	.7382	.7361
.0030	.7090	.7073	.7055	.7036	.7025	.7017	.6996	.6975	.6954	.6940	.6931	.6907
.0040	.6754	.6735	.6716	.6695	.6683	.6674	.6652	.6629	.6606	.6591	.6581	.6555
.0050	.6477	.6457	.6436	.6415	.6402	.6392	.6369	.6345	.6320	.6304	.6293	.6266
.0060	.6241	.6220	.6198	.6176	.6162	.6152	.6128	.6103	.6076	.6060	.6049	.6021
.0070	.6035	.6013	.5991	.5967	.5953	.5943	.5918	.5892	.5865	.5848	.5836	.5807
.0080	.5852	.5830	.5807	.5783	.5768	.5758	.5732	.5705	.5677	.5660	.5648	.5618
.0090	.5688	.5665	.5642	.5617	.5602	.5591	.5565	.5538	.5509	.5491	.5480	.5449
.0100	.5539	.5515	.5492	.5467	.5452	.5440	.5414	.5386	.5357	.5339	.5327	.5295
.0200	.4526	.4501	.4475	.4447	.4431	.4419	.4390	.4359	.4328	.4308	.4295	.4261
.0300	.3929	.3903	.3877	.3849	.3832	.3820	.3790	.3759	.3727	.3707	.3694	.3660
.0400	.3516	.3490	.3463	.3435	.3419	.3406	.3377	.3346	.3314	.3294	.3281	.3247
.0500	.3206	.3180	.3153	.3126	.3109	.3097	.3068	.3037	.3006	.2987	.2973	.2940
.0600	.2961	.2935	.2909	.2882	.2866	.2854	.2825	.2795	.2764	.2745	.2732	.2699
.0700	.2761	.2736	.2710	.2684	.2667	.2656	.2627	.2598	.2567	.2549	.2536	.2504
.0800	.2594	.2569	.2544	.2518	.2502	.2490	.2462	.2434	.2404	.2385	.2373	.2341
.0900	.2452	.2427	.2403	.2377	.2361	.2350	.2322	.2294	.2265	.2246	.2234	.2203
.1000	.2329	.2305	.2280	.2255	.2239	.2228	.2201	.2173	.2144	.2127	.2115	.2084

TABLE 89. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Scatchard* — Continued

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9299	.9292	.9285	.9278	.9271	.9263	.9255	.9247	.9239	.9230	.9221
.0002	.9028	.9019	.9010	.9000	.8990	.8980	.8969	.8958	.8947	.8935	.8922
.0003	.8829	.8818	.8807	.8795	.8783	.8771	.8758	.8745	.8731	.8717	.8702
.0004	.8665	.8653	.8640	.8627	.8614	.8600	.8586	.8571	.8555	.8539	.8523
.0005	.8524	.8511	.8497	.8483	.8468	.8453	.8437	.8421	.8404	.8387	.8368
.0006	.8400	.8385	.8371	.8355	.8339	.8323	.8306	.8289	.8271	.8252	.8232
.0007	.8288	.8272	.8257	.8240	.8224	.8206	.8188	.8170	.8150	.8131	.8110
.0008	.8185	.8169	.8153	.8135	.8118	.8100	.8081	.8061	.8041	.8020	.7998
.0009	.8091	.8074	.8056	.8039	.8020	.8001	.7981	.7961	.7940	.7918	.7895
.0010	.8003	.7985	.7967	.7948	.7929	.7909	.7889	.7868	.7846	.7823	.7799
.0020	.7340	.7317	.7294	.7271	.7246	.7221	.7195	.7168	.7140	.7112	.7082
.0030	.6883	.6857	.6832	.6805	.6777	.6749	.6720	.6689	.6658	.6626	.6592
.0040	.6529	.6501	.6474	.6445	.6415	.6384	.6353	.6320	.6286	.6252	.6215
.0050	.6239	.6210	.6180	.6149	.6118	.6086	.6053	.6018	.5982	.5946	.5908
.0060	.5992	.5962	.5931	.5899	.5866	.5833	.5798	.5762	.5725	.5687	.5648
.0070	.5777	.5746	.5714	.5682	.5648	.5613	.5577	.5540	.5502	.5464	.5423
.0080	.5588	.5555	.5523	.5489	.5455	.5419	.5383	.5345	.5306	.5266	.5224
.0090	.5418	.5385	.5352	.5317	.5282	.5246	.5209	.5170	.5130	.5090	.5047
.0100	.5264	.5230	.5196	.5162	.5126	.5089	.5051	.5012	.4972	.4931	.4888
.0200	.4227	.4191	.4155	.4118	.4079	.4040	.4000	.3958	.3916	.3872	.3827
.0300	.3625	.3589	.3552	.3515	.3476	.3437	.3397	.3355	.3312	.3269	.3224
.0400	.3213	.3177	.3141	.3103	.3065	.3027	.2987	.2946	.2904	.2862	.2818
.0500	.2906	.2871	.2835	.2799	.2761	.2723	.2684	.2644	.2604	.2562	.2520
.0600	.2666	.2631	.2596	.2561	.2524	.2487	.2449	.2410	.2370	.2330	.2288
.0700	.2471	.2437	.2403	.2368	.2332	.2296	.2259	.2221	.2182	.2143	.2103
.0800	.2309	.2276	.2243	.2208	.2173	.2138	.2102	.2065	.2027	.1989	.1950
.0900	.2172	.2139	.2107	.2073	.2039	.2004	.1969	.1933	.1896	.1859	.1821
.1000	.2054	.2022	.1990	.1957	.1923	.1890	.1855	.1820	.1784	.1748	.1710

TABLE 90. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9146	.9140	.9134	.9128	.9124	.9121	.9115	.9108	.9100	.9095	.9092	.9084
.0002	.8821	.8813	.8805	.8796	.8791	.8787	.8778	.8769	.8759	.8752	.8748	.8737
.0003	.8582	.8572	.8563	.8553	.8547	.8542	.8531	.8520	.8508	.8501	.8496	.8483
.0004	.8387	.8376	.8366	.8354	.8347	.8342	.8330	.8317	.8304	.8296	.8290	.8275
.0005	.8220	.8209	.8197	.8185	.8177	.8171	.8158	.8144	.8130	.8121	.8114	.8099
.0006	.8073	.8061	.8048	.8035	.8027	.8021	.8007	.7992	.7976	.7966	.7960	.7943
.0007	.7941	.7928	.7915	.7901	.7892	.7886	.7871	.7855	.7838	.7828	.7821	.7803
.0008	.7821	.7807	.7793	.7778	.7769	.7763	.7747	.7730	.7713	.7702	.7695	.7676
.0009	.7710	.7696	.7681	.7666	.7656	.7649	.7633	.7616	.7597	.7586	.7579	.7559
.0010	.7607	.7592	.7577	.7561	.7551	.7544	.7527	.7509	.7490	.7479	.7471	.7450
.0020	.6841	.6822	.6803	.6784	.6771	.6763	.6741	.6719	.6696	.6681	.6671	.6646
.0030	.6322	.6302	.6280	.6258	.6245	.6235	.6211	.6186	.6160	.6144	.6133	.6105
.0040	.5926	.5904	.5881	.5857	.5843	.5832	.5807	.5780	.5753	.5736	.5724	.5694
.0050	.5604	.5581	.5557	.5532	.5517	.5506	.5480	.5452	.5423	.5405	.5393	.5362
.0060	.5333	.5309	.5285	.5259	.5244	.5232	.5205	.5176	.5147	.5128	.5116	.5084
.0070	.5100	.5075	.5050	.5024	.5008	.4997	.4969	.4939	.4909	.4890	.4878	.4845
.0080	.4895	.4870	.4844	.4818	.4802	.4790	.4761	.4732	.4701	.4682	.4669	.4636
.0090	.4712	.4687	.4662	.4635	.4618	.4606	.4577	.4547	.4516	.4497	.4484	.4450
.0100	.4549	.4523	.4497	.4470	.4453	.4441	.4412	.4382	.4350	.4331	.4318	.4284
.0200	.3475	.3449	.3422	.3395	.3378	.3366	.3336	.3305	.3274	.3254	.3241	.3207
.0300	.2878	.2853	.2827	.2800	.2783	.2771	.2743	.2713	.2682	.2663	.2651	.2618
.0400	.2481	.2457	.2432	.2406	.2390	.2379	.2351	.2323	.2293	.2275	.2263	.2232
.0500	.2194	.2170	.2146	.2121	.2106	.2095	.2069	.2042	.2014	.1996	.1985	.1955
.0600	.1973	.1951	.1928	.1904	.1889	.1879	.1854	.1827	.1800	.1784	.1773	.1744
.0700	.1798	.1776	.1754	.1731	.1717	.1707	.1683	.1658	.1632	.1616	.1605	.1578
.0800	.1655	.1633	.1612	.1590	.1577	.1567	.1543	.1519	.1495	.1479	.1469	.1443
.0900	.1535	.1514	.1494	.1472	.1459	.1450	.1427	.1404	.1380	.1366	.1356	.1331
.1000	.1433	.1413	.1393	.1372	.1360	.1351	.1329	.1307	.1284	.1269	.1260	.1236

TABLE 90. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*—Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9076	.9067	.9058	.9049	.9040	.9030	.9020	.9009	.8998	.8987	.8975
.0002	.8726	.8714	.8702	.8690	.8677	.8664	.8650	.8636	.8621	.8606	.8590
.0003	.8469	.8455	.8441	.8427	.8411	.8396	.8380	.8363	.8345	.8327	.8308
.0004	.8261	.8245	.8229	.8213	.8196	.8178	.8160	.8141	.8122	.8102	.8080
.0005	.8082	.8065	.8048	.8030	.8012	.7992	.7973	.7952	.7931	.7909	.7886
.0006	.7926	.7907	.7889	.7870	.7850	.7829	.7808	.7786	.7763	.7740	.7716
.0007	.7785	.7765	.7746	.7726	.7705	.7683	.7661	.7637	.7613	.7589	.7563
.0008	.7657	.7636	.7616	.7595	.7573	.7550	.7527	.7502	.7477	.7451	.7424
.0009	.7539	.7518	.7496	.7474	.7451	.7428	.7403	.7378	.7352	.7325	.7297
.0010	.7430	.7408	.7386	.7363	.7339	.7315	.7289	.7263	.7236	.7208	.7179
.0020	.6621	.6594	.6566	.6538	.6509	.6478	.6448	.6415	.6382	.6348	.6313
.0030	.6077	.6047	.6017	.5985	.5953	.5920	.5886	.5850	.5814	.5777	.5737
.0040	.5664	.5632	.5600	.5567	.5532	.5497	.5461	.5423	.5385	.5346	.5304
.0050	.5331	.5298	.5264	.5229	.5194	.5157	.5120	.5081	.5041	.5000	.4957
.0060	.5052	.5017	.4983	.4947	.4911	.4873	.4835	.4795	.4754	.4712	.4668
.0070	.4812	.4777	.4742	.4706	.4668	.4630	.4591	.4550	.4509	.4466	.4422
.0080	.4602	.4567	.4531	.4495	.4457	.4418	.4379	.4337	.4295	.4253	.4208
.0090	.4416	.4381	.4345	.4308	.4270	.4231	.4191	.4149	.4107	.4064	.4019
.0100	.4250	.4214	.4178	.4140	.4102	.4063	.4023	.3981	.3939	.3895	.3850
.0200	.3172	.3137	.3100	.3063	.3025	.2987	.2947	.2906	.2865	.2822	.2778
.0300	.2585	.2550	.2516	.2480	.2444	.2407	.2370	.2331	.2292	.2252	.2211
.0400	.2201	.2168	.2135	.2101	.2067	.2032	.1997	.1960	.1923	.1886	.1848
.0500	.1925	.1894	.1862	.1831	.1798	.1765	.1732	.1697	.1663	.1628	.1591
.0600	.1716	.1686	.1656	.1626	.1595	.1564	.1532	.1500	.1467	.1434	.1400
.0700	.1551	.1522	.1494	.1465	.1436	.1406	.1376	.1345	.1314	.1283	.1250
.0800	.1417	.1390	.1362	.1335	.1307	.1278	.1250	.1220	.1191	.1161	.1131
.0900	.1306	.1279	.1253	.1227	.1200	.1173	.1146	.1118	.1089	.1061	.1032
.1000	.1212	.1187	.1161	.1136	.1110	.1084	.1058	.1031	.1004	.0977	.0950

TABLE 91. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9045	.9038	.9032	.9025	.9020	.9017	.9010	.9002	.8993	.8988	.8985	.8976
.0002	.8684	.8675	.8666	.8657	.8651	.8647	.8636	.8626	.8615	.8608	.8603	.8591
.0003	.8419	.8409	.8398	.8387	.8381	.8376	.8364	.8351	.8338	.8330	.8324	.8310
.0004	.8205	.8193	.8181	.8169	.8161	.8155	.8142	.8128	.8113	.8104	.8098	.8082
.0005	.8021	.8009	.7996	.7982	.7974	.7968	.7953	.7938	.7922	.7912	.7905	.7888
.0006	.7860	.7847	.7833	.7818	.7809	.7803	.7787	.7771	.7754	.7743	.7736	.7717
.0007	.7715	.7701	.7687	.7671	.7662	.7655	.7639	.7621	.7603	.7592	.7584	.7565
.0008	.7584	.7569	.7554	.7538	.7528	.7521	.7503	.7485	.7466	.7455	.7447	.7426
.0009	.7463	.7448	.7432	.7415	.7405	.7397	.7379	.7361	.7341	.7329	.7320	.7299
.0010	.7351	.7335	.7319	.7301	.7291	.7283	.7265	.7245	.7225	.7212	.7203	.7181
.0020	.6524	.6504	.6484	.6462	.6449	.6440	.6417	.6393	.6368	.6353	.6342	.6315
.0030	.5970	.5948	.5926	.5902	.5888	.5877	.5852	.5826	.5798	.5781	.5770	.5740
.0040	.5550	.5527	.5503	.5478	.5463	.5452	.5426	.5398	.5369	.5351	.5339	.5307
.0050	.5212	.5188	.5164	.5138	.5122	.5110	.5083	.5054	.5024	.5005	.4993	.4960
.0060	.4930	.4905	.4880	.4853	.4837	.4825	.4797	.4767	.4737	.4718	.4705	.4672
.0070	.4688	.4663	.4637	.4610	.4593	.4581	.4553	.4523	.4491	.4472	.4459	.4425
.0080	.4477	.4451	.4425	.4397	.4381	.4369	.4340	.4309	.4278	.4258	.4245	.4211
.0090	.4289	.4264	.4237	.4210	.4193	.4181	.4151	.4121	.4089	.4069	.4056	.4022
.0100	.4122	.4096	.4070	.4042	.4025	.4013	.3983	.3953	.3921	.3901	.3888	.3853
.0200	.3045	.3019	.2993	.2966	.2949	.2937	.2908	.2878	.2847	.2828	.2815	.2782
.0300	.2463	.2439	.2414	.2388	.2372	.2361	.2333	.2305	.2275	.2257	.2245	.2214
.0400	.2085	.2062	.2038	.2014	.1999	.1988	.1962	.1935	.1908	.1891	.1880	.1850
.0500	.1815	.1793	.1771	.1748	.1734	.1723	.1699	.1674	.1648	.1632	.1621	.1594
.0600	.1611	.1590	.1569	.1547	.1534	.1524	.1501	.1478	.1453	.1438	.1428	.1402
.0700	.1451	.1431	.1411	.1390	.1378	.1369	.1347	.1324	.1301	.1287	.1277	.1253
.0800	.1321	.1302	.1283	.1263	.1251	.1243	.1222	.1201	.1178	.1165	.1156	.1133
.0900	.1214	.1196	.1178	.1159	.1147	.1139	.1119	.1099	.1078	.1065	.1056	.1034
.1000	.1124	.1106	.1089	.1071	.1060	.1052	.1033	.1013	.0993	.0981	.0973	.0952

TABLE 91. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8967	.8957	.8947	.8937	.8926	.8915	.8904	.8892	.8880	.8868	.8854
.0002	.8579	.8566	.8552	.8539	.8524	.8510	.8495	.8479	.8463	.8446	.8428
.0003	.8295	.8280	.8264	.8248	.8231	.8214	.8196	.8178	.8159	.8139	.8118
.0004	.8066	.8049	.8031	.8013	.7994	.7975	.7955	.7934	.7913	.7891	.7868
.0005	.7870	.7851	.7832	.7813	.7793	.7772	.7750	.7727	.7704	.7681	.7655
.0006	.7699	.7679	.7658	.7637	.7616	.7593	.7570	.7546	.7522	.7496	.7469
.0007	.7545	.7524	.7502	.7480	.7457	.7434	.7410	.7384	.7358	.7332	.7303
.0008	.7405	.7383	.7361	.7338	.7314	.7289	.7264	.7237	.7210	.7182	.7153
.0009	.7277	.7255	.7231	.7207	.7182	.7157	.7130	.7103	.7075	.7046	.7015
.0010	.7159	.7135	.7111	.7086	.7061	.7034	.7007	.6979	.6949	.6919	.6888
.0020	.6288	.6259	.6230	.6200	.6168	.6136	.6103	.6069	.6034	.5998	.5960
.0030	.5710	.5679	.5647	.5613	.5579	.5544	.5509	.5471	.5433	.5394	.5352
.0040	.5276	.5242	.5208	.5174	.5138	.5101	.5063	.5024	.4984	.4943	.4900
.0050	.4928	.4893	.4858	.4822	.4785	.4748	.4709	.4668	.4627	.4585	.4541
.0060	.4638	.4603	.4567	.4531	.4493	.4455	.4415	.4374	.4332	.4289	.4244
.0070	.4391	.4356	.4320	.4283	.4244	.4205	.4165	.4124	.4082	.4038	.3993
.0080	.4177	.4141	.4104	.4067	.4029	.3989	.3949	.3907	.3865	.3822	.3776
.0090	.3988	.3951	.3915	.3877	.3839	.3799	.3759	.3717	.3675	.3631	.3586
.0100	.3819	.3783	.3746	.3708	.3670	.3630	.3590	.3548	.3506	.3462	.3417
.0200	.2748	.2713	.2678	.2642	.2605	.2568	.2530	.2490	.2450	.2410	.2367
.0300	.2183	.2150	.2117	.2084	.2050	.2015	.1980	.1943	.1906	.1869	.1831
.0400	.1821	.1791	.1760	.1729	.1697	.1665	.1632	.1599	.1565	.1531	.1496
.0500	.1567	.1538	.1510	.1480	.1451	.1421	.1391	.1360	.1329	.1297	.1265
.0600	.1376	.1350	.1323	.1296	.1268	.1240	.1212	.1183	.1154	.1125	.1095
.0700	.1228	.1203	.1178	.1152	.1126	.1100	.1074	.1047	.1020	.0992	.0964
.0800	.1110	.1086	.1062	.1038	.1013	.0989	.0964	.0938	.0913	.0887	.0861
.0900	.1012	.0989	.0967	.0944	.0921	.0897	.0874	.0850	.0826	.0802	.0777
.1000	.0931	.0909	.0887	.0866	.0844	.0821	.0799	.0776	.0754	.0731	.0707

TABLE 92. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*
(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8747	.8739	.8730	.8721	.8716	.8712	.8702	.8692	.8681	.8674	.8670	.8658
.0002	.8285	.8274	.8262	.8250	.8243	.8238	.8225	.8211	.8197	.8188	.8182	.8167
.0003	.7950	.7937	.7924	.7910	.7901	.7895	.7880	.7864	.7848	.7837	.7830	.7813
.0004	.7681	.7666	.7652	.7636	.7627	.7620	.7603	.7585	.7567	.7556	.7548	.7528
.0005	.7453	.7437	.7421	.7404	.7394	.7387	.7369	.7350	.7330	.7318	.7309	.7288
.0006	.7254	.7237	.7220	.7202	.7192	.7184	.7164	.7144	.7123	.7110	.7101	.7079
.0007	.7076	.7059	.7041	.7022	.7011	.7003	.6983	.6962	.6940	.6926	.6917	.6893
.0008	.6916	.6898	.6880	.6860	.6848	.6839	.6818	.6796	.6774	.6759	.6750	.6725
.0009	.6770	.6751	.6732	.6712	.6699	.6690	.6669	.6646	.6622	.6607	.6598	.6572
.0010	.6635	.6615	.6596	.6575	.6562	.6553	.6530	.6507	.6483	.6468	.6457	.6431
.0020	.5658	.5635	.5612	.5587	.5572	.5561	.5535	.5507	.5479	.5461	.5449	.5418
.0030	.5027	.5002	.4977	.4951	.4935	.4923	.4895	.4866	.4835	.4816	.4803	.4771
.0040	.4561	.4536	.4510	.4483	.4466	.4454	.4425	.4395	.4363	.4344	.4331	.4297
.0050	.4195	.4169	.4143	.4115	.4098	.4086	.4056	.4026	.3994	.3974	.3961	.3927
.0060	.3894	.3868	.3842	.3814	.3797	.3785	.3755	.3724	.3692	.3673	.3659	.3625
.0070	.3642	.3616	.3589	.3561	.3544	.3532	.3502	.3471	.3439	.3420	.3406	.3372
.0080	.3424	.3398	.3372	.3344	.3327	.3315	.3286	.3255	.3223	.3204	.3190	.3156
.0090	.3235	.3209	.3183	.3155	.3138	.3126	.3097	.3067	.3035	.3016	.3002	.2969
.0100	.3068	.3042	.3016	.2988	.2972	.2960	.2931	.2901	.2870	.2850	.2837	.2804
.0200	.2049	.2026	.2002	.1978	.1963	.1952	.1927	.1900	.1873	.1856	.1845	.1816
.0300	.1544	.1523	.1503	.1481	.1468	.1459	.1436	.1413	.1389	.1374	.1365	.1339
.0400	.1236	.1218	.1199	.1180	.1169	.1160	.1140	.1120	.1098	.1085	.1077	.1054
.0500	.1028	.1011	.0994	.0977	.0967	.0959	.0941	.0923	.0904	.0892	.0884	.0864
.0600	.0877	.0862	.0846	.0831	.0821	.0814	.0798	.0781	.0764	.0753	.0746	.0729
.0700	.0762	.0749	.0735	.0720	.0712	.0705	.0690	.0675	.0659	.0650	.0643	.0627
.0800	.0673	.0660	.0647	.0634	.0626	.0620	.0606	.0592	.0578	.0569	.0563	.0548
.0900	.0601	.0589	.0577	.0565	.0557	.0552	.0539	.0526	.0513	.0505	.0499	.0485
.1000	.0542	.0531	.0520	.0508	.0501	.0496	.0484	.0472	.0460	.0452	.0447	.0434

TABLE 92. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8647	.8634	.8621	.8608	.8595	.8581	.8566	.8551	.8535	.8519	.8503
.0002	.8151	.8135	.8118	.8101	.8083	.8064	.8045	.8025	.8004	.7983	.7961
.0003	.7794	.7775	.7756	.7735	.7714	.7693	.7671	.7647	.7624	.7599	.7573
.0004	.7508	.7487	.7465	.7443	.7420	.7396	.7371	.7345	.7319	.7292	.7264
.0005	.7266	.7243	.7220	.7196	.7171	.7145	.7119	.7091	.7063	.7034	.7003
.0006	.7056	.7031	.7007	.6981	.6955	.6927	.6900	.6870	.6840	.6810	.6777
.0007	.6869	.6843	.6817	.6790	.6763	.6734	.6705	.6674	.6643	.6611	.6577
.0008	.6700	.6673	.6646	.6618	.6590	.6560	.6530	.6498	.6465	.6432	.6397
.0009	.6546	.6518	.6491	.6462	.6432	.6402	.6370	.6337	.6304	.6269	.6233
.0010	.6404	.6376	.6347	.6318	.6287	.6256	.6224	.6190	.6155	.6120	.6083
.0020	.5387	.5354	.5321	.5286	.5251	.5214	.5177	.5138	.5099	.5058	.5015
.0030	.4737	.4702	.4667	.4631	.4593	.4555	.4516	.4475	.4433	.4390	.4346
.0040	.4263	.4227	.4191	.4153	.4115	.4076	.4036	.3994	.3952	.3908	.3863
.0050	.3892	.3856	.3819	.3782	.3743	.3704	.3663	.3621	.3579	.3535	.3490
.0060	.3590	.3554	.3517	.3480	.3441	.3402	.3362	.3320	.3278	.3235	.3190
.0070	.3338	.3302	.3265	.3228	.3190	.3151	.3111	.3070	.3028	.2985	.2941
.0080	.3122	.3086	.3050	.3013	.2975	.2937	.2897	.2857	.2815	.2773	.2729
.0090	.2935	.2900	.2864	.2827	.2790	.2752	.2713	.2673	.2632	.2591	.2548
.0100	.2771	.2736	.2700	.2664	.2627	.2590	.2551	.2512	.2472	.2431	.2389
.0200	.1787	.1757	.1726	.1695	.1664	.1632	.1600	.1567	.1533	.1499	.1465
.0300	.1314	.1288	.1262	.1235	.1208	.1181	.1154	.1126	.1097	.1069	.1040
.0400	.1032	.1009	.0986	.0963	.0940	.0916	.0892	.0868	.0844	.0819	.0794
.0500	.0845	.0824	.0804	.0783	.0762	.0742	.0721	.0699	.0678	.0657	.0635
.0600	.0711	.0692	.0674	.0656	.0637	.0618	.0600	.0581	.0562	.0543	.0524
.0700	.0611	.0594	.0577	.0561	.0544	.0527	.0510	.0493	.0476	.0459	.0442
.0800	.0533	.0518	.0503	.0488	.0472	.0457	.0442	.0426	.0411	.0396	.0380
.0900	.0472	.0458	.0444	.0430	.0416	.0402	.0388	.0374	.0360	.0346	.0332
.1000	.0422	.0409	.0396	.0383	.0370	.0357	.0344	.0331	.0318	.0306	.0293

TABLE 93. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Scatchard*

(Electrolyte, $z_+z_-=16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8365	.8355	.8344	.8332	.8325	.8320	.8308	.8295	.8281	.8273	.8267	.8252
.0002	.7781	.7767	.7753	.7738	.7729	.7722	.7706	.7689	.7671	.7660	.7653	.7634
.0003	.7365	.7349	.7332	.7315	.7305	.7297	.7278	.7259	.7239	.7226	.7217	.7195
.0004	.7034	.7016	.6998	.6979	.6968	.6960	.6939	.6918	.6896	.6882	.6872	.6848
.0005	.6757	.6738	.6719	.6699	.6686	.6677	.6656	.6633	.6609	.6594	.6584	.6559
.0006	.6518	.6498	.6477	.6456	.6443	.6434	.6411	.6387	.6362	.6346	.6336	.6309
.0007	.6306	.6285	.6264	.6242	.6228	.6219	.6195	.6170	.6144	.6128	.6117	.6089
.0008	.6116	.6095	.6073	.6050	.6036	.6026	.6001	.5976	.5949	.5932	.5921	.5892
.0009	.5944	.5922	.5900	.5876	.5862	.5851	.5826	.5800	.5772	.5755	.5743	.5714
.0010	.5787	.5764	.5741	.5717	.5702	.5692	.5666	.5639	.5611	.5593	.5581	.5551
.0020	.4680	.4654	.4629	.4602	.4585	.4573	.4544	.4514	.4483	.4464	.4451	.4417
.0030	.3997	.3971	.3944	.3917	.3900	.3887	.3858	.3827	.3795	.3775	.3762	.3728
.0040	.3511	.3485	.3459	.3431	.3414	.3402	.3372	.3341	.3309	.3290	.3277	.3243
.0050	.3140	.3114	.3088	.3061	.3044	.3032	.3003	.2972	.2941	.2922	.2909	.2875
.0060	.2844	.2819	.2793	.2766	.2750	.2738	.2709	.2680	.2649	.2630	.2617	.2585
.0070	.2601	.2576	.2550	.2524	.2508	.2497	.2469	.2440	.2410	.2391	.2379	.2347
.0080	.2396	.2372	.2347	.2321	.2306	.2294	.2267	.2239	.2210	.2192	.2180	.2149
.0090	.2221	.2197	.2173	.2148	.2133	.2122	.2095	.2068	.2040	.2022	.2011	.1981
.0100	.2069	.2046	.2022	.1998	.1983	.1973	.1947	.1920	.1893	.1876	.1864	.1835
.0200	.1208	.1190	.1171	.1152	.1141	.1133	.1113	.1093	.1072	.1059	.1050	.1028
.0300	.0828	.0814	.0799	.0784	.0775	.0768	.0752	.0736	.0719	.0709	.0703	.0685
.0400	.0616	.0604	.0591	.0579	.0571	.0566	.0553	.0540	.0526	.0518	.0512	.0498
.0500	.0481	.0471	.0461	.0450	.0444	.0439	.0428	.0417	.0405	.0399	.0394	.0382
.0600	.0389	.0381	.0372	.0362	.0357	.0353	.0344	.0334	.0324	.0318	.0314	.0304
.0700	.0323	.0315	.0308	.0300	.0295	.0291	.0283	.0275	.0266	.0261	.0258	.0249
.0800	.0274	.0267	.0260	.0253	.0249	.0245	.0238	.0231	.0223	.0219	.0216	.0208
.0900	.0235	.0229	.0223	.0217	.0213	.0210	.0204	.0197	.0191	.0186	.0184	.0177
.1000	.0205	.0200	.0194	.0188	.0185	.0182	.0177	.0171	.0165	.0161	.0159	.0153

TABLE 93. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Scatchard* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8237	.8222	.8205	.8189	.8172	.8154	.8135	.8116	.8097	.8076	.8055
.0002	.7614	.7594	.7573	.7551	.7529	.7506	.7482	.7458	.7432	.7406	.7378
.0003	.7173	.7149	.7126	.7101	.7075	.7049	.7022	.6993	.6964	.6934	.6903
.0004	.6824	.6798	.6772	.6745	.6717	.6688	.6659	.6628	.6596	.6563	.6529
.0005	.6533	.6505	.6477	.6448	.6418	.6388	.6356	.6324	.6290	.6255	.6219
.0006	.6281	.6252	.6223	.6193	.6162	.6130	.6097	.6062	.6027	.5991	.5953
.0007	.6060	.6030	.6000	.5968	.5936	.5903	.5869	.5833	.5796	.5759	.5720
.0008	.5863	.5832	.5800	.5768	.5734	.5700	.5665	.5628	.5591	.5552	.5512
.0009	.5684	.5652	.5620	.5586	.5552	.5517	.5481	.5444	.5405	.5366	.5325
.0010	.5520	.5488	.5455	.5421	.5386	.5350	.5314	.5275	.5236	.5196	.5154
.0020	.4383	.4347	.4311	.4274	.4236	.4197	.4157	.4116	.4073	.4030	.3985
.0030	.3693	.3657	.3620	.3583	.3544	.3505	.3464	.3423	.3380	.3337	.3292
.0040	.3208	.3172	.3136	.3099	.3061	.3022	.2982	.2941	.2900	.2858	.2813
.0050	.2842	.2806	.2771	.2735	.2698	.2660	.2621	.2581	.2541	.2500	.2457
.0060	.2552	.2517	.2483	.2448	.2412	.2375	.2338	.2299	.2260	.2221	.2179
.0070	.2315	.2282	.2249	.2214	.2179	.2144	.2108	.2071	.2033	.1995	.1955
.0080	.2118	.2086	.2053	.2020	.1986	.1952	.1917	.1881	.1845	.1808	.1770
.0090	.1951	.1919	.1888	.1856	.1823	.1790	.1756	.1722	.1687	.1651	.1615
.0100	.1806	.1776	.1745	.1714	.1683	.1651	.1618	.1585	.1551	.1517	.1482
.0200	.1006	.0984	.0961	.0938	.0915	.0892	.0868	.0845	.0821	.0797	.0772
.0300	.0668	.0650	.0633	.0615	.0597	.0580	.0562	.0543	.0525	.0507	.0489
.0400	.0484	.0470	.0456	.0441	.0427	.0413	.0399	.0384	.0370	.0356	.0341
.0500	.0371	.0359	.0347	.0335	.0323	.0312	.0300	.0288	.0276	.0265	.0253
.0600	.0294	.0284	.0274	.0264	.0254	.0245	.0235	.0225	.0215	.0206	.0196
.0700	.0240	.0232	.0223	.0215	.0206	.0198	.0189	.0181	.0173	.0165	.0156
.0800	.0201	.0193	.0186	.0178	.0171	.0163	.0156	.0149	.0142	.0135	.0128
.0900	.0170	.0164	.0157	.0151	.0144	.0138	.0131	.0125	.0119	.0113	.0107
.1000	.0147	.0141	.0135	.0129	.0123	.0118	.0112	.0106	.0101	.0096	.0090

TABLE 94. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9887	.9886	.9886	.9885	.9884	.9882	.9882	.9881	.9880
.0002	.9844	.9843	.9842	.9841	.9840	.9840	.9838	.9837	.9835	.9834	.9834	.9832
.0003	.9811	.9809	.9808	.9806	.9805	.9805	.9803	.9801	.9799	.9798	.9797	.9795
.0004	.9782	.9781	.9779	.9778	.9776	.9776	.9774	.9772	.9770	.9768	.9767	.9765
.0005	.9758	.9756	.9754	.9752	.9751	.9750	.9748	.9746	.9744	.9742	.9741	.9739
.0006	.9736	.9734	.9732	.9730	.9729	.9728	.9725	.9723	.9720	.9719	.9718	.9715
.0007	.9716	.9714	.9712	.9709	.9708	.9707	.9705	.9702	.9699	.9697	.9696	.9693
.0008	.9697	.9695	.9693	.9690	.9689	.9688	.9685	.9683	.9680	.9678	.9676	.9673
.0009	.9680	.9678	.9675	.9673	.9671	.9670	.9667	.9664	.9661	.9659	.9658	.9655
.0010	.9664	.9661	.9659	.9656	.9655	.9653	.9650	.9647	.9644	.9642	.9641	.9637
.0020	.9536	.9533	.9529	.9526	.9523	.9522	.9518	.9514	.9509	.9507	.9505	.9500
.0030	.9442	.9438	.9434	.9430	.9427	.9425	.9421	.9416	.9410	.9407	.9405	.9399
.0040	.9365	.9361	.9357	.9352	.9349	.9347	.9341	.9336	.9330	.9326	.9324	.9317
.0050	.9300	.9295	.9290	.9285	.9282	.9280	.9274	.9268	.9261	.9257	.9254	.9247
.0060	.9242	.9237	.9232	.9226	.9223	.9220	.9214	.9207	.9200	.9196	.9193	.9185
.0070	.9190	.9185	.9180	.9174	.9170	.9167	.9160	.9153	.9146	.9141	.9138	.9130
.0080	.9143	.9138	.9132	.9125	.9121	.9119	.9112	.9104	.9096	.9092	.9088	.9080
.0090	.9100	.9094	.9088	.9081	.9077	.9074	.9067	.9059	.9051	.9046	.9042	.9033
.0100	.9059	.9053	.9047	.9040	.9036	.9032	.9025	.9017	.9008	.9003	.8999	.8990
.0200	.8757	.8749	.8741	.8733	.8727	.8723	.8713	.8703	.8692	.8685	.8681	.8669
.0300	.8551	.8542	.8533	.8523	.8517	.8512	.8501	.8490	.8477	.8470	.8464	.8451
.0400	.8393	.8383	.8373	.8362	.8355	.8350	.8338	.8325	.8312	.8304	.8298	.8283
.0500	.8263	.8252	.8242	.8230	.8223	.8218	.8205	.8191	.8177	.8168	.8162	.8146
.0600	.8153	.8142	.8130	.8118	.8111	.8105	.8092	.8078	.8063	.8053	.8047	.8031
.0700	.8057	.8046	.8034	.8021	.8013	.8008	.7994	.7979	.7963	.7954	.7947	.7930
.0800	.7972	.7961	.7949	.7936	.7927	.7922	.7907	.7892	.7876	.7866	.7859	.7841
.0900	.7897	.7885	.7872	.7859	.7850	.7844	.7830	.7814	.7797	.7787	.7780	.7762
.1000	.7828	.7816	.7803	.7789	.7781	.7774	.7759	.7743	.7726	.7716	.7709	.7690

TABLE 94. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9877	.9876	.9875	.9873	.9872	.9870	.9868	.9867	.9865	.9863
.0002	.9830	.9828	.9826	.9824	.9822	.9820	.9818	.9816	.9813	.9811	.9808
.0003	.9793	.9791	.9789	.9786	.9784	.9781	.9778	.9776	.9773	.9770	.9766
.0004	.9763	.9760	.9757	.9755	.9752	.9749	.9746	.9742	.9739	.9736	.9732
.0005	.9736	.9733	.9730	.9727	.9724	.9720	.9717	.9713	.9710	.9706	.9702
.0006	.9712	.9709	.9706	.9702	.9699	.9695	.9691	.9687	.9683	.9679	.9675
.0007	.9690	.9687	.9683	.9680	.9676	.9672	.9668	.9664	.9659	.9655	.9650
.0008	.9670	.9666	.9663	.9659	.9655	.9651	.9647	.9642	.9637	.9633	.9628
.0009	.9651	.9647	.9643	.9639	.9635	.9631	.9626	.9622	.9617	.9612	.9606
.0010	.9633	.9629	.9625	.9621	.9617	.9612	.9608	.9603	.9597	.9592	.9587
.0020	.9495	.9489	.9484	.9478	.9472	.9466	.9460	.9453	.9446	.9439	.9431
.0030	.9393	.9387	.9380	.9373	.9366	.9359	.9351	.9343	.9335	.9327	.9318
.0040	.9310	.9303	.9296	.9288	.9280	.9272	.9263	.9254	.9245	.9235	.9225
.0050	.9240	.9232	.9224	.9215	.9207	.9198	.9188	.9178	.9168	.9158	.9147
.0060	.9177	.9169	.9160	.9151	.9142	.9132	.9122	.9111	.9101	.9089	.9077
.0070	.9122	.9113	.9103	.9094	.9084	.9074	.9063	.9051	.9040	.9028	.9015
.0080	.9071	.9061	.9052	.9041	.9031	.9020	.9009	.8997	.8985	.8972	.8959
.0090	.9024	.9014	.9004	.8993	.8982	.8971	.8959	.8947	.8934	.8921	.8907
.0100	.8980	.8970	.8960	.8949	.8937	.8925	.8913	.8900	.8887	.8874	.8859
.0200	.8657	.8643	.8630	.8616	.8602	.8587	.8571	.8555	.8538	.8521	.8503
.0300	.8437	.8422	.8407	.8391	.8375	.8358	.8340	.8321	.8302	.8283	.8262
.0400	.8268	.8252	.8235	.8218	.8201	.8182	.8163	.8143	.8122	.8101	.8079
.0500	.8130	.8113	.8096	.8077	.8059	.8039	.8019	.7997	.7976	.7953	.7930
.0600	.8014	.7996	.7977	.7958	.7939	.7918	.7897	.7875	.7852	.7829	.7804
.0700	.7913	.7894	.7875	.7855	.7835	.7813	.7792	.7768	.7745	.7721	.7695
.0800	.7823	.7804	.7785	.7764	.7743	.7721	.7699	.7675	.7651	.7626	.7599
.0900	.7744	.7724	.7704	.7683	.7661	.7639	.7616	.7591	.7566	.7541	.7514
.1000	.7671	.7651	.7631	.7609	.7587	.7564	.7541	.7515	.7490	.7464	.7436

TABLE 95. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9778	.9776	.9774	.9773	.9772	.9771	.9768	.9766	.9765	.9764	.9762
.0002	.9691	.9689	.9687	.9684	.9683	.9682	.9679	.9676	.9673	.9671	.9670	.9667
.0003	.9625	.9622	.9619	.9616	.9615	.9613	.9610	.9607	.9603	.9601	.9599	.9595
.0004	.9569	.9566	.9563	.9560	.9558	.9556	.9553	.9549	.9545	.9542	.9540	.9536
.0005	.9521	.9518	.9515	.9511	.9509	.9507	.9503	.9499	.9494	.9491	.9489	.9484
.0006	.9479	.9475	.9471	.9467	.9465	.9463	.9458	.9454	.9449	.9446	.9443	.9438
.0007	.9439	.9436	.9432	.9427	.9425	.9423	.9418	.9413	.9407	.9404	.9402	.9396
.0008	.9403	.9399	.9395	.9391	.9388	.9386	.9380	.9375	.9369	.9366	.9363	.9357
.0009	.9370	.9366	.9361	.9356	.9353	.9351	.9346	.9340	.9334	.9330	.9328	.9321
.0010	.9338	.9334	.9329	.9324	.9321	.9319	.9313	.9307	.9301	.9297	.9294	.9287
.0020	.9093	.9087	.9081	.9074	.9070	.9067	.9059	.9051	.9043	.9038	.9034	.9025
.0030	.8915	.8908	.8900	.8892	.8887	.8884	.8875	.8866	.8856	.8849	.8845	.8834
.0040	.8771	.8763	.8755	.8746	.8740	.8736	.8726	.8716	.8705	.8698	.8693	.8681
.0050	.8649	.8640	.8631	.8622	.8615	.8611	.8600	.8589	.8577	.8569	.8564	.8551
.0060	.8542	.8533	.8523	.8513	.8506	.8501	.8490	.8478	.8465	.8457	.8451	.8437
.0070	.8446	.8437	.8426	.8416	.8409	.8404	.8391	.8379	.8365	.8357	.8351	.8336
.0080	.8360	.8350	.8339	.8327	.8320	.8315	.8302	.8289	.8274	.8266	.8260	.8244
.0090	.8280	.8270	.8258	.8247	.8239	.8234	.8220	.8206	.8191	.8182	.8176	.8160
.0100	.8207	.8196	.8184	.8172	.8164	.8159	.8145	.8130	.8115	.8106	.8099	.8082
.0200	.7669	.7655	.7641	.7626	.7616	.7609	.7592	.7574	.7555	.7544	.7536	.7515
.0300	.7312	.7297	.7281	.7264	.7254	.7246	.7227	.7207	.7186	.7173	.7165	.7141
.0400	.7043	.7027	.7010	.6992	.6981	.6972	.6952	.6931	.6909	.6895	.6886	.6861
.0500	.6827	.6810	.6792	.6774	.6761	.6753	.6732	.6710	.6686	.6672	.6662	.6636
.0600	.6647	.6629	.6610	.6591	.6578	.6570	.6548	.6525	.6501	.6486	.6476	.6449
.0700	.6492	.6473	.6454	.6434	.6422	.6412	.6390	.6367	.6342	.6327	.6316	.6289
.0800	.6356	.6337	.6318	.6298	.6284	.6275	.6252	.6228	.6203	.6187	.6177	.6149
.0900	.6236	.6217	.6197	.6176	.6163	.6153	.6130	.6106	.6080	.6064	.6054	.6025
.1000	.6128	.6108	.6088	.6067	.6054	.6044	.6021	.5996	.5970	.5954	.5943	.5914

TABLE 95. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9759	.9756	.9754	.9751	.9748	.9745	.9742	.9739	.9735	.9732	.9728
.0002	.9663	.9659	.9656	.9652	.9648	.9643	.9639	.9634	.9630	.9625	.9620
.0003	.9591	.9586	.9582	.9577	.9572	.9567	.9562	.9556	.9551	.9545	.9538
.0004	.9531	.9526	.9521	.9515	.9510	.9504	.9498	.9491	.9485	.9478	.9471
.0005	.9479	.9473	.9467	.9461	.9455	.9449	.9442	.9435	.9428	.9420	.9412
.0006	.9432	.9426	.9420	.9413	.9407	.9400	.9392	.9385	.9377	.9369	.9360
.0007	.9390	.9383	.9377	.9370	.9363	.9355	.9347	.9339	.9331	.9322	.9313
.0008	.9351	.9344	.9337	.9329	.9322	.9314	.9306	.9297	.9288	.9279	.9269
.0009	.9314	.9307	.9300	.9292	.9284	.9275	.9267	.9258	.9248	.9239	.9228
.0010	.9280	.9273	.9265	.9257	.9248	.9240	.9230	.9221	.9211	.9201	.9190
.0020	.9015	.9005	.8994	.8984	.8972	.8961	.8948	.8936	.8922	.8909	.8895
.0030	.8823	.8811	.8799	.8786	.8773	.8759	.8745	.8730	.8714	.8698	.8682
.0040	.8668	.8655	.8641	.8627	.8612	.8597	.8581	.8564	.8547	.8529	.8511
.0050	.8537	.8523	.8508	.8492	.8476	.8460	.8442	.8424	.8405	.8386	.8366
.0060	.8423	.8407	.8391	.8375	.8358	.8340	.8321	.8302	.8282	.8262	.8240
.0070	.8320	.8304	.8287	.8270	.8252	.8233	.8213	.8193	.8172	.8151	.8128
.0080	.8228	.8210	.8193	.8175	.8156	.8136	.8116	.8094	.8073	.8050	.8026
.0090	.8143	.8125	.8107	.8088	.8068	.8048	.8027	.8004	.7982	.7959	.7934
.0100	.8065	.8046	.8027	.8008	.7988	.7966	.7945	.7921	.7898	.7874	.7848
.0200	.7494	.7471	.7448	.7424	.7399	.7373	.7347	.7318	.7290	.7261	.7229
.0300	.7118	.7093	.7067	.7041	.7014	.6985	.6956	.6924	.6893	.6861	.6827
.0400	.6836	.6809	.6782	.6754	.6725	.6694	.6663	.6630	.6597	.6563	.6527
.0500	.6610	.6582	.6554	.6524	.6494	.6462	.6430	.6396	.6361	.6326	.6288
.0600	.6422	.6393	.6364	.6334	.6302	.6270	.6236	.6201	.6165	.6129	.6090
.0700	.6261	.6231	.6202	.6171	.6139	.6105	.6071	.6035	.5998	.5961	.5921
.0800	.6121	.6090	.6060	.6028	.5996	.5962	.5927	.5890	.5853	.5815	.5775
.0900	.5996	.5966	.5935	.5903	.5870	.5835	.5800	.5762	.5725	.5686	.5645
.1000	.5885	.5854	.5823	.5790	.5757	.5722	.5686	.5648	.5610	.5571	.5530

TABLE 96. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9671	.9668	.9666	.9663	.9662	.9661	.9658	.9655	.9651	.9650	.9648	.9645
.0002	.9540	.9537	.9534	.9530	.9528	.9526	.9522	.9518	.9514	.9511	.9509	.9504
.0003	.9442	.9438	.9434	.9430	.9427	.9425	.9421	.9416	.9410	.9407	.9405	.9399
.0004	.9361	.9357	.9352	.9347	.9344	.9342	.9337	.9331	.9325	.9321	.9318	.9312
.0005	.9291	.9286	.9281	.9276	.9272	.9270	.9264	.9257	.9250	.9246	.9244	.9236
.0006	.9228	.9223	.9217	.9212	.9208	.9205	.9199	.9192	.9184	.9180	.9177	.9169
.0007	.9171	.9165	.9160	.9153	.9149	.9147	.9140	.9132	.9124	.9120	.9116	.9108
.0008	.9119	.9113	.9106	.9100	.9096	.9093	.9085	.9077	.9069	.9064	.9061	.9051
.0009	.9070	.9064	.9057	.9050	.9046	.9043	.9035	.9027	.9018	.9012	.9009	.8999
.0010	.9024	.9018	.9011	.9004	.8999	.8996	.8987	.8979	.8970	.8964	.8960	.8950
.0020	.8671	.8662	.8653	.8644	.8638	.8633	.8622	.8611	.8599	.8592	.8586	.8573
.0030	.8417	.8407	.8397	.8386	.8378	.8373	.8361	.8348	.8333	.8325	.8319	.8303
.0040	.8215	.8203	.8192	.8179	.8171	.8166	.8152	.8137	.8121	.8112	.8105	.8088
.0050	.8044	.8031	.8019	.8005	.7997	.7991	.7976	.7960	.7943	.7933	.7926	.7907
.0060	.7895	.7882	.7868	.7854	.7845	.7839	.7823	.7806	.7788	.7777	.7770	.7750
.0070	.7763	.7749	.7735	.7720	.7710	.7704	.7687	.7669	.7650	.7639	.7631	.7610
.0080	.7644	.7630	.7615	.7599	.7589	.7582	.7565	.7546	.7527	.7515	.7507	.7485
.0090	.7535	.7520	.7505	.7489	.7479	.7471	.7453	.7434	.7414	.7402	.7393	.7371
.0100	.7435	.7420	.7404	.7388	.7377	.7369	.7351	.7331	.7310	.7297	.7289	.7266
.0200	.6716	.6698	.6679	.6659	.6646	.6637	.6615	.6592	.6567	.6552	.6542	.6514
.0300	.6253	.6233	.6213	.6192	.6178	.6168	.6144	.6119	.6092	.6076	.6064	.6035
.0400	.5911	.5891	.5869	.5847	.5832	.5822	.5797	.5771	.5742	.5725	.5714	.5683
.0500	.5641	.5620	.5598	.5575	.5560	.5549	.5523	.5496	.5467	.5450	.5438	.5406
.0600	.5419	.5397	.5374	.5351	.5336	.5325	.5298	.5271	.5241	.5223	.5211	.5179
.0700	.5230	.5208	.5185	.5161	.5146	.5135	.5108	.5080	.5050	.5032	.5020	.4987
.0800	.5067	.5045	.5022	.4998	.4982	.4971	.4944	.4916	.4885	.4867	.4855	.4822
.0900	.4924	.4902	.4878	.4854	.4838	.4827	.4800	.4771	.4741	.4722	.4710	.4677
.1000	.4797	.4774	.4751	.4726	.4710	.4699	.4672	.4643	.4612	.4594	.4581	.4548

TABLE 96. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9641	.9637	.9633	.9629	.9625	.9620	.9615	.9610	.9605	.9600	.9594
.0002	.9499	.9494	.9488	.9482	.9476	.9470	.9464	.9457	.9450	.9443	.9435
.0003	.9393	.9386	.9379	.9373	.9365	.9358	.9350	.9342	.9333	.9325	.9316
.0004	.9305	.9297	.9290	.9282	.9274	.9265	.9256	.9247	.9237	.9228	.9217
.0005	.9228	.9220	.9212	.9203	.9194	.9185	.9175	.9165	.9154	.9143	.9132
.0006	.9160	.9152	.9143	.9133	.9123	.9113	.9103	.9091	.9080	.9068	.9056
.0007	.9099	.9089	.9080	.9070	.9059	.9048	.9037	.9025	.9013	.9000	.8987
.0008	.9042	.9032	.9022	.9011	.9000	.8988	.8977	.8964	.8951	.8938	.8924
.0009	.8989	.8979	.8968	.8957	.8945	.8933	.8921	.8907	.8894	.8880	.8865
.0010	.8940	.8929	.8918	.8906	.8894	.8881	.8868	.8854	.8840	.8826	.8810
.0020	.8560	.8545	.8530	.8515	.8499	.8482	.8465	.8447	.8428	.8409	.8389
.0030	.8288	.8271	.8253	.8235	.8217	.8197	.8177	.8156	.8135	.8113	.8089
.0040	.8071	.8052	.8033	.8013	.7992	.7971	.7949	.7925	.7902	.7877	.7851
.0050	.7888	.7868	.7847	.7826	.7804	.7781	.7757	.7732	.7706	.7680	.7652
.0060	.7730	.7708	.7687	.7664	.7641	.7616	.7591	.7564	.7537	.7509	.7480
.0070	.7589	.7567	.7544	.7520	.7496	.7470	.7444	.7416	.7387	.7358	.7327
.0080	.7463	.7440	.7416	.7391	.7366	.7339	.7312	.7283	.7253	.7223	.7191
.0090	.7348	.7324	.7299	.7274	.7247	.7220	.7191	.7161	.7131	.7100	.7067
.0100	.7242	.7217	.7192	.7166	.7139	.7110	.7081	.7050	.7019	.6987	.6953
.0200	.6487	.6457	.6428	.6397	.6365	.6331	.6297	.6261	.6224	.6187	.6147
.0300	.6005	.5973	.5941	.5908	.5874	.5838	.5801	.5762	.5723	.5683	.5641
.0400	.5652	.5619	.5585	.5550	.5515	.5477	.5439	.5399	.5358	.5317	.5273
.0500	.5374	.5340	.5306	.5270	.5233	.5195	.5156	.5115	.5073	.5031	.4986
.0600	.5146	.5112	.5077	.5041	.5003	.4964	.4925	.4883	.4841	.4798	.4752
.0700	.4954	.4919	.4884	.4847	.4810	.4770	.4730	.4688	.4646	.4602	.4556
.0800	.4788	.4753	.4718	.4681	.4643	.4603	.4563	.4520	.4478	.4434	.4388
.0900	.4643	.4608	.4572	.4535	.4497	.4457	.4417	.4374	.4332	.4288	.4242
.1000	.4515	.4479	.4443	.4406	.4368	.4328	.4288	.4245	.4202	.4158	.4112

TABLE 97. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9563	.9560	.9557	.9554	.9552	.9550	.9546	.9542	.9538	.9535	.9534	.9529
.0002	.9392	.9388	.9383	.9378	.9376	.9373	.9368	.9363	.9357	.9353	.9351	.9344
.0003	.9263	.9258	.9253	.9248	.9244	.9241	.9235	.9229	.9221	.9217	.9214	.9206
.0004	.9157	.9152	.9146	.9139	.9135	.9132	.9125	.9118	.9110	.9105	.9102	.9093
.0005	.9066	.9060	.9053	.9046	.9041	.9038	.9030	.9022	.9013	.9008	.9004	.8995
.0006	.8984	.8977	.8970	.8963	.8958	.8954	.8946	.8937	.8928	.8922	.8918	.8907
.0007	.8910	.8903	.8895	.8887	.8882	.8879	.8870	.8860	.8850	.8844	.8839	.8828
.0008	.8842	.8835	.8827	.8818	.8813	.8809	.8799	.8789	.8778	.8772	.8767	.8756
.0009	.8779	.8771	.8763	.8754	.8748	.8744	.8734	.8724	.8712	.8705	.8701	.8688
.0010	.8720	.8712	.8703	.8694	.8688	.8684	.8673	.8662	.8650	.8643	.8638	.8625
.0020	.8268	.8257	.8246	.8234	.8226	.8220	.8207	.8192	.8177	.8168	.8161	.8144
.0030	.7948	.7935	.7922	.7908	.7899	.7892	.7876	.7860	.7842	.7831	.7824	.7804
.0040	.7693	.7679	.7665	.7649	.7639	.7632	.7615	.7597	.7577	.7565	.7557	.7536
.0050	.7481	.7466	.7450	.7433	.7423	.7415	.7396	.7377	.7356	.7343	.7335	.7312
.0060	.7297	.7281	.7264	.7247	.7235	.7227	.7208	.7187	.7165	.7152	.7143	.7118
.0070	.7134	.7118	.7100	.7082	.7070	.7062	.7042	.7020	.6997	.6983	.6974	.6948
.0080	.6989	.6972	.6953	.6935	.6922	.6914	.6893	.6870	.6846	.6832	.6822	.6796
.0090	.6857	.6839	.6820	.6801	.6788	.6779	.6757	.6735	.6710	.6695	.6685	.6658
.0100	.6736	.6717	.6698	.6678	.6665	.6656	.6634	.6610	.6585	.6570	.6559	.6532
.0200	.5881	.5860	.5838	.5815	.5800	.5790	.5764	.5737	.5708	.5691	.5679	.5647
.0300	.5347	.5325	.5301	.5277	.5261	.5250	.5223	.5195	.5164	.5146	.5133	.5100
.0400	.4961	.4938	.4914	.4889	.4873	.4861	.4834	.4804	.4773	.4754	.4741	.4707
.0500	.4661	.4638	.4613	.4588	.4572	.4560	.4532	.4502	.4470	.4451	.4438	.4404
.0600	.4418	.4394	.4370	.4344	.4328	.4316	.4287	.4258	.4226	.4207	.4194	.4159
.0700	.4214	.4190	.4166	.4140	.4124	.4112	.4083	.4054	.4022	.4003	.3989	.3955
.0800	.4040	.4016	.3992	.3966	.3949	.3938	.3909	.3879	.3848	.3828	.3815	.3781
.0900	.3888	.3865	.3840	.3815	.3798	.3786	.3758	.3728	.3697	.3678	.3665	.3630
.1000	.3755	.3731	.3707	.3681	.3665	.3653	.3625	.3595	.3564	.3545	.3532	.3498

TABLE 97. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9524	.9519	.9514	.9508	.9503	.9497	.9490	.9484	.9477	.9470	.9463
.0002	.9338	.9330	.9323	.9316	.9308	.9300	.9291	.9282	.9273	.9264	.9254
.0003	.9198	.9190	.9181	.9172	.9163	.9153	.9143	.9132	.9121	.9110	.9098
.0004	.9084	.9074	.9064	.9054	.9043	.9032	.9021	.9009	.8996	.8984	.8970
.0005	.8985	.8974	.8963	.8952	.8940	.8928	.8915	.8902	.8888	.8874	.8859
.0006	.8896	.8885	.8873	.8861	.8849	.8835	.8822	.8807	.8793	.8777	.8761
.0007	.8817	.8804	.8792	.8779	.8766	.8751	.8737	.8722	.8706	.8690	.8673
.0008	.8743	.8731	.8717	.8704	.8690	.8675	.8659	.8643	.8626	.8610	.8591
.0009	.8676	.8662	.8648	.8634	.8619	.8603	.8587	.8570	.8553	.8535	.8516
.0010	.8612	.8598	.8584	.8569	.8553	.8537	.8520	.8502	.8484	.8466	.8446
.0020	.8127	.8109	.8090	.8070	.8050	.8029	.8007	.7984	.7961	.7937	.7911
.0030	.7785	.7763	.7742	.7719	.7696	.7672	.7647	.7621	.7594	.7566	.7537
.0040	.7514	.7491	.7467	.7443	.7417	.7391	.7363	.7334	.7305	.7275	.7243
.0050	.7288	.7263	.7238	.7212	.7185	.7156	.7127	.7096	.7065	.7033	.6999
.0060	.7094	.7068	.7041	.7013	.6985	.6955	.6924	.6892	.6859	.6825	.6790
.0070	.6923	.6895	.6868	.6839	.6809	.6778	.6746	.6712	.6678	.6643	.6606
.0080	.6769	.6741	.6713	.6683	.6652	.6620	.6587	.6552	.6517	.6481	.6442
.0090	.6631	.6602	.6572	.6542	.6510	.6477	.6443	.6407	.6371	.6334	.6294
.0100	.6504	.6474	.6444	.6412	.6380	.6346	.6312	.6275	.6238	.6200	.6160
.0200	.5615	.5581	.5547	.5511	.5475	.5436	.5397	.5356	.5314	.5272	.5227
.0300	.5066	.5031	.4995	.4957	.4919	.4879	.4838	.4795	.4752	.4707	.4660
.0400	.4673	.4636	.4600	.4561	.4522	.4481	.4440	.4396	.4352	.4307	.4260
.0500	.4369	.4332	.4295	.4257	.4217	.4176	.4134	.4090	.4046	.4001	.3954
.0600	.4124	.4087	.4050	.4011	.3972	.3931	.3889	.3845	.3801	.3756	.3709
.0700	.3920	.3883	.3846	.3808	.3768	.3727	.3686	.3642	.3598	.3553	.3506
.0800	.3746	.3709	.3673	.3634	.3595	.3554	.3513	.3469	.3426	.3381	.3335
.0900	.3596	.3559	.3522	.3484	.3445	.3405	.3364	.3320	.3277	.3233	.3187
.1000	.3463	.3427	.3391	.3353	.3314	.3274	.3233	.3190	.3147	.3104	.3058

TABLE 98. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9352	.9348	.9343	.9338	.9335	.9333	.9327	.9321	.9315	.9311	.9309	.9302
.0002	.9102	.9095	.9089	.9082	.9078	.9075	.9067	.9059	.9051	.9046	.9042	.9033
.0003	.8916	.8908	.8901	.8893	.8888	.8884	.8875	.8865	.8855	.8849	.8845	.8834
.0004	.8763	.8755	.8746	.8737	.8732	.8727	.8717	.8706	.8695	.8688	.8683	.8670
.0005	.8632	.8623	.8614	.8604	.8597	.8593	.8581	.8570	.8557	.8550	.8544	.8530
.0006	.8516	.8506	.8496	.8485	.8478	.8473	.8461	.8449	.8435	.8427	.8421	.8406
.0007	.8411	.8401	.8390	.8378	.8371	.8366	.8353	.8340	.8325	.8317	.8311	.8295
.0008	.8315	.8304	.8293	.8281	.8273	.8268	.8254	.8240	.8225	.8216	.8209	.8193
.0009	.8226	.8215	.8203	.8190	.8182	.8177	.8163	.8148	.8132	.8122	.8116	.8098
.0010	.8143	.8132	.8119	.8106	.8098	.8092	.8077	.8062	.8046	.8036	.8029	.8011
.0020	.7519	.7504	.7488	.7471	.7461	.7453	.7435	.7415	.7394	.7382	.7373	.7350
.0030	.7085	.7068	.7051	.7032	.7020	.7011	.6990	.6968	.6945	.6930	.6920	.6895
.0040	.6748	.6730	.6710	.6690	.6677	.6668	.6645	.6621	.6596	.6580	.6570	.6542
.0050	.6470	.6450	.6430	.6409	.6395	.6385	.6361	.6336	.6309	.6293	.6281	.6252
.0060	.6233	.6213	.6191	.6169	.6155	.6144	.6119	.6093	.6065	.6048	.6037	.6006
.0070	.6026	.6005	.5983	.5960	.5945	.5935	.5909	.5882	.5853	.5835	.5823	.5792
.0080	.5842	.5821	.5798	.5775	.5760	.5749	.5722	.5695	.5665	.5647	.5635	.5602
.0090	.5678	.5656	.5633	.5608	.5593	.5582	.5555	.5527	.5496	.5478	.5466	.5433
.0100	.5528	.5506	.5482	.5458	.5442	.5431	.5403	.5374	.5344	.5325	.5312	.5279
.0200	.4510	.4486	.4461	.4434	.4417	.4405	.4376	.4345	.4313	.4293	.4279	.4244
.0300	.3910	.3886	.3860	.3834	.3816	.3804	.3775	.3744	.3711	.3691	.3678	.3642
.0400	.3494	.3470	.3445	.3419	.3402	.3390	.3360	.3330	.3297	.3278	.3265	.3229
.0500	.3182	.3158	.3134	.3108	.3091	.3079	.3051	.3021	.2989	.2970	.2957	.2922
.0600	.2936	.2913	.2888	.2863	.2847	.2835	.2807	.2778	.2747	.2728	.2716	.2682
.0700	.2736	.2713	.2689	.2664	.2648	.2637	.2609	.2581	.2550	.2532	.2520	.2487
.0800	.2568	.2545	.2522	.2498	.2482	.2471	.2444	.2416	.2387	.2369	.2357	.2325
.0900	.2425	.2403	.2380	.2356	.2341	.2330	.2304	.2276	.2248	.2230	.2218	.2187
.1000	.2301	.2279	.2257	.2234	.2219	.2208	.2183	.2156	.2128	.2111	.2099	.2069

TABLE 98. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9295	.9287	.9279	.9271	.9263	.9254	.9245	.9236	.9226	.9216	.9205
.0002	.9023	.9013	.9002	.8991	.8980	.8968	.8956	.8943	.8930	.8916	.8902
.0003	.8822	.8810	.8797	.8784	.8771	.8757	.8742	.8727	.8711	.8695	.8678
.0004	.8658	.8644	.8630	.8615	.8600	.8584	.8568	.8550	.8533	.8515	.8495
.0005	.8516	.8501	.8486	.8470	.8453	.8436	.8418	.8399	.8380	.8360	.8339
.0006	.8391	.8375	.8359	.8341	.8324	.8305	.8286	.8265	.8245	.8223	.8201
.0007	.8279	.8261	.8244	.8226	.8207	.8187	.8167	.8145	.8123	.8101	.8077
.0008	.8176	.8158	.8139	.8120	.8100	.8079	.8058	.8035	.8012	.7989	.7963
.0009	.8081	.8062	.8043	.8022	.8002	.7980	.7958	.7934	.7910	.7885	.7859
.0010	.7992	.7973	.7953	.7932	.7910	.7888	.7864	.7840	.7815	.7789	.7762
.0020	.7327	.7302	.7276	.7250	.7223	.7195	.7165	.7135	.7103	.7071	.7037
.0030	.6868	.6840	.6812	.6782	.6752	.6720	.6687	.6653	.6617	.6582	.6543
.0040	.6513	.6483	.6453	.6421	.6388	.6354	.6318	.6281	.6244	.6205	.6164
.0050	.6222	.6190	.6158	.6125	.6090	.6054	.6017	.5978	.5939	.5898	.5855
.0060	.5975	.5942	.5908	.5874	.5838	.5800	.5762	.5722	.5681	.5639	.5595
.0070	.5760	.5726	.5691	.5656	.5619	.5580	.5541	.5499	.5457	.5415	.5369
.0080	.5570	.5535	.5500	.5463	.5426	.5386	.5346	.5304	.5261	.5217	.5171
.0090	.5399	.5364	.5328	.5291	.5253	.5212	.5172	.5129	.5085	.5041	.4994
.0100	.5245	.5209	.5173	.5135	.5096	.5056	.5014	.4971	.4927	.4882	.4834
.0200	.4208	.4170	.4131	.4092	.4051	.4008	.3965	.3920	.3874	.3828	.3779
.0300	.3606	.3568	.3530	.3490	.3450	.3408	.3365	.3320	.3275	.3230	.3182
.0400	.3194	.3157	.3120	.3081	.3041	.3000	.2958	.2915	.2871	.2827	.2780
.0500	.2888	.2852	.2815	.2777	.2739	.2699	.2658	.2616	.2574	.2531	.2486
.0600	.2648	.2613	.2577	.2541	.2503	.2464	.2425	.2384	.2343	.2302	.2259
.0700	.2454	.2420	.2385	.2349	.2313	.2275	.2237	.2198	.2158	.2118	.2076
.0800	.2293	.2259	.2226	.2191	.2156	.2119	.2082	.2043	.2005	.1966	.1926
.0900	.2156	.2123	.2090	.2057	.2022	.1987	.1951	.1913	.1876	.1839	.1799
.1000	.2038	.2006	.1974	.1941	.1908	.1873	.1838	.1802	.1766	.1729	.1691

TABLE 99. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9146	.9140	.9134	.9128	.9123	.9120	.9113	.9106	.9097	.9092	.9089	.9080
.0002	.8820	.8813	.8804	.8796	.8790	.8786	.8776	.8766	.8755	.8748	.8744	.8731
.0003	.8581	.8572	.8562	.8552	.8545	.8540	.8529	.8517	.8504	.8496	.8490	.8476
.0004	.8386	.8375	.8364	.8353	.8346	.8340	.8327	.8314	.8299	.8290	.8284	.8268
.0005	.8219	.8207	.8195	.8183	.8175	.8169	.8155	.8140	.8124	.8114	.8108	.8090
.0006	.8072	.8059	.8047	.8033	.8024	.8018	.8003	.7987	.7970	.7960	.7953	.7934
.0007	.7939	.7926	.7913	.7899	.7889	.7883	.7867	.7850	.7832	.7821	.7813	.7794
.0008	.7819	.7805	.7791	.7776	.7766	.7760	.7743	.7725	.7706	.7695	.7687	.7666
.0009	.7708	.7694	.7679	.7663	.7653	.7646	.7629	.7610	.7590	.7579	.7570	.7549
.0010	.7605	.7590	.7575	.7559	.7548	.7541	.7523	.7504	.7483	.7471	.7462	.7440
.0020	.6837	.6819	.6799	.6779	.6767	.6757	.6735	.6712	.6686	.6671	.6661	.6633
.0030	.6317	.6296	.6275	.6253	.6239	.6229	.6204	.6178	.6150	.6133	.6121	.6091
.0040	.5919	.5897	.5875	.5851	.5836	.5825	.5799	.5771	.5741	.5723	.5711	.5679
.0050	.5596	.5573	.5550	.5525	.5509	.5498	.5471	.5442	.5411	.5392	.5380	.5346
.0060	.5324	.5301	.5277	.5251	.5235	.5224	.5195	.5166	.5134	.5115	.5102	.5067
.0070	.5090	.5066	.5041	.5016	.4999	.4987	.4958	.4928	.4896	.4876	.4863	.4828
.0080	.4884	.4860	.4835	.4809	.4792	.4780	.4751	.4720	.4687	.4668	.4654	.4618
.0090	.4701	.4677	.4652	.4625	.4608	.4596	.4566	.4535	.4502	.4483	.4469	.4433
.0100	.4537	.4512	.4487	.4460	.4443	.4431	.4401	.4370	.4336	.4316	.4303	.4266
.0200	.3459	.3434	.3408	.3382	.3364	.3352	.3322	.3291	.3258	.3238	.3225	.3189
.0300	.2859	.2835	.2811	.2785	.2768	.2757	.2728	.2698	.2667	.2648	.2635	.2601
.0400	.2461	.2438	.2415	.2390	.2375	.2363	.2336	.2308	.2278	.2260	.2248	.2216
.0500	.2173	.2151	.2128	.2105	.2090	.2079	.2054	.2027	.1998	.1981	.1970	.1939
.0600	.1952	.1931	.1909	.1887	.1873	.1863	.1838	.1813	.1786	.1770	.1759	.1730
.0700	.1776	.1756	.1735	.1714	.1700	.1691	.1667	.1643	.1617	.1602	.1592	.1564
.0800	.1632	.1613	.1593	.1573	.1560	.1551	.1528	.1505	.1480	.1466	.1456	.1429
.0900	.1512	.1494	.1475	.1455	.1443	.1434	.1412	.1390	.1366	.1352	.1343	.1318
.1000	.1410	.1392	.1374	.1355	.1343	.1335	.1314	.1293	.1270	.1257	.1247	.1223

TABLE 99. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9071	.9061	.9051	.9041	.9030	.9018	.9007	.8994	.8982	.8969	.8955
.0002	.8719	.8706	.8692	.8678	.8664	.8648	.8633	.8616	.8599	.8582	.8563
.0003	.8461	.8445	.8430	.8413	.8396	.8378	.8359	.8340	.8320	.8299	.8277
.0004	.8251	.8234	.8216	.8198	.8178	.8158	.8137	.8116	.8093	.8070	.8046
.0005	.8072	.8053	.8034	.8014	.7993	.7971	.7948	.7925	.7900	.7875	.7849
.0006	.7915	.7894	.7874	.7852	.7830	.7806	.7782	.7757	.7731	.7704	.7676
.0007	.7773	.7752	.7730	.7707	.7684	.7659	.7633	.7607	.7579	.7551	.7521
.0008	.7645	.7622	.7599	.7575	.7551	.7525	.7498	.7470	.7442	.7412	.7381
.0009	.7527	.7503	.7479	.7454	.7429	.7402	.7374	.7345	.7315	.7285	.7252
.0010	.7417	.7393	.7368	.7342	.7316	.7288	.7259	.7229	.7198	.7167	.7133
.0020	.6605	.6575	.6545	.6513	.6481	.6447	.6412	.6375	.6338	.6300	.6259
.0030	.6060	.6027	.5994	.5959	.5923	.5886	.5848	.5807	.5767	.5725	.5681
.0040	.5646	.5611	.5576	.5539	.5502	.5462	.5422	.5379	.5336	.5293	.5246
.0050	.5312	.5276	.5239	.5201	.5162	.5121	.5080	.5036	.4992	.4946	.4899
.0060	.5032	.4995	.4958	.4919	.4879	.4837	.4795	.4750	.4705	.4659	.4610
.0070	.4792	.4755	.4717	.4677	.4637	.4594	.4551	.4506	.4460	.4413	.4364
.0080	.4583	.4544	.4506	.4466	.4425	.4382	.4339	.4293	.4247	.4200	.4150
.0090	.4397	.4358	.4319	.4279	.4238	.4195	.4151	.4105	.4059	.4012	.3962
.0100	.4230	.4191	.4152	.4112	.4071	.4027	.3984	.3937	.3891	.3844	.3794
.0200	.3153	.3115	.3077	.3037	.2997	.2955	.2913	.2869	.2824	.2779	.2732
.0300	.2567	.2531	.2495	.2457	.2420	.2380	.2341	.2299	.2258	.2216	.2172
.0400	.2184	.2150	.2116	.2081	.2045	.2008	.1971	.1933	.1894	.1855	.1815
.0500	.1909	.1877	.1845	.1812	.1779	.1744	.1709	.1673	.1637	.1601	.1563
.0600	.1701	.1670	.1640	.1609	.1578	.1545	.1512	.1478	.1445	.1411	.1375
.0700	.1537	.1508	.1479	.1450	.1420	.1389	.1358	.1326	.1294	.1263	.1229
.0800	.1403	.1376	.1349	.1321	.1292	.1263	.1234	.1204	.1174	.1143	.1112
.0900	.1293	.1267	.1241	.1214	.1187	.1159	.1131	.1103	.1074	.1045	.1016
.1000	.1200	.1174	.1150	.1124	.1098	.1072	.1045	.1018	.0991	.0963	.0935

TABLE 100. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9044	.9038	.9031	.9024	.9019	.9016	.9008	.9000	.8990	.8985	.8981	.8971
.0002	.8683	.8674	.8665	.8656	.8649	.8645	.8634	.8623	.8611	.8603	.8598	.8585
.0003	.8418	.8408	.8397	.8386	.8379	.8374	.8361	.8347	.8333	.8324	.8318	.8302
.0004	.8203	.8192	.8180	.8167	.8159	.8153	.8139	.8124	.8108	.8098	.8091	.8074
.0005	.8020	.8007	.7994	.7980	.7971	.7965	.7950	.7933	.7916	.7905	.7898	.7879
.0006	.7858	.7845	.7831	.7816	.7807	.7800	.7783	.7766	.7747	.7736	.7728	.7708
.0007	.7714	.7699	.7685	.7669	.7659	.7652	.7634	.7616	.7596	.7584	.7576	.7554
.0008	.7582	.7567	.7552	.7535	.7525	.7517	.7499	.7480	.7459	.7447	.7438	.7415
.0009	.7461	.7446	.7429	.7412	.7402	.7394	.7375	.7355	.7333	.7320	.7311	.7288
.0010	.7349	.7333	.7316	.7299	.7287	.7279	.7260	.7239	.7217	.7203	.7194	.7170
.0020	.6519	.6500	.6479	.6458	.6444	.6434	.6410	.6385	.6358	.6342	.6331	.6301
.0030	.5964	.5943	.5920	.5897	.5881	.5871	.5844	.5817	.5787	.5769	.5757	.5725
.0040	.5543	.5521	.5497	.5472	.5456	.5445	.5417	.5388	.5357	.5338	.5325	.5291
.0050	.5204	.5181	.5156	.5130	.5114	.5102	.5073	.5043	.5011	.4992	.4978	.4943
.0060	.4921	.4897	.4872	.4845	.4828	.4816	.4787	.4756	.4723	.4704	.4690	.4654
.0070	.4678	.4653	.4628	.4601	.4584	.4572	.4542	.4511	.4478	.4458	.4444	.4408
.0080	.4466	.4441	.4415	.4388	.4371	.4359	.4329	.4297	.4264	.4244	.4230	.4193
.0090	.4278	.4253	.4227	.4200	.4183	.4170	.4140	.4109	.4075	.4055	.4041	.4004
.0100	.4110	.4085	.4059	.4032	.4014	.4002	.3972	.3940	.3906	.3886	.3872	.3835
.0200	.3029	.3005	.2979	.2953	.2936	.2924	.2895	.2864	.2832	.2813	.2799	.2764
.0300	.2445	.2422	.2398	.2374	.2358	.2346	.2319	.2291	.2261	.2243	.2230	.2198
.0400	.2066	.2044	.2022	.1999	.1984	.1973	.1948	.1922	.1894	.1877	.1865	.1835
.0500	.1795	.1775	.1754	.1732	.1719	.1709	.1685	.1660	.1634	.1619	.1608	.1580
.0600	.1591	.1572	.1552	.1532	.1519	.1510	.1487	.1464	.1440	.1425	.1415	.1389
.0700	.1431	.1413	.1394	.1375	.1363	.1354	.1333	.1311	.1288	.1274	.1265	.1240
.0800	.1301	.1284	.1266	.1248	.1237	.1228	.1208	.1188	.1166	.1153	.1144	.1121
.0900	.1194	.1178	.1161	.1144	.1132	.1125	.1106	.1086	.1066	.1053	.1045	.1023
.1000	.1104	.1088	.1072	.1056	.1045	.1038	.1020	.1001	.0981	.0970	.0962	.0941

TABLE 100. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8961	.8950	.8939	.8927	.8915	.8903	.8890	.8876	.8862	.8848	.8832
.0002	.8571	.8556	.8541	.8526	.8510	.8493	.8475	.8457	.8438	.8419	.8399
.0003	.8286	.8269	.8252	.8233	.8214	.8195	.8174	.8153	.8131	.8108	.8084
.0004	.8056	.8036	.8017	.7996	.7975	.7953	.7930	.7907	.7882	.7857	.7830
.0005	.7859	.7838	.7817	.7795	.7772	.7748	.7723	.7697	.7671	.7644	.7615
.0006	.7687	.7664	.7642	.7618	.7594	.7568	.7542	.7514	.7486	.7457	.7426
.0007	.7532	.7509	.7485	.7460	.7435	.7408	.7380	.7351	.7321	.7291	.7258
.0008	.7392	.7368	.7343	.7317	.7290	.7262	.7233	.7203	.7172	.7140	.7106
.0009	.7264	.7238	.7213	.7186	.7158	.7129	.7099	.7067	.7035	.7002	.6967
.0010	.7145	.7119	.7092	.7064	.7035	.7005	.6974	.6942	.6909	.6875	.6838
.0020	.6271	.6239	.6207	.6173	.6139	.6102	.6065	.6026	.5987	.5946	.5903
.0030	.5692	.5657	.5622	.5586	.5548	.5509	.5468	.5426	.5383	.5339	.5293
.0040	.5257	.5220	.5183	.5145	.5106	.5064	.5022	.4978	.4933	.4888	.4840
.0050	.4908	.4870	.4833	.4793	.4753	.4710	.4667	.4622	.4576	.4530	.4480
.0060	.4618	.4580	.4542	.4501	.4460	.4417	.4374	.4328	.4282	.4234	.4185
.0070	.4371	.4333	.4294	.4253	.4212	.4168	.4124	.4078	.4032	.3984	.3934
.0080	.4157	.4118	.4079	.4038	.3996	.3953	.3909	.3862	.3816	.3768	.3718
.0090	.3967	.3928	.3889	.3848	.3807	.3763	.3719	.3673	.3626	.3579	.3529
.0100	.3799	.3760	.3720	.3680	.3638	.3595	.3551	.3504	.3458	.3411	.3361
.0200	.2729	.2692	.2655	.2617	.2578	.2538	.2497	.2454	.2411	.2368	.2323
.0300	.2166	.2131	.2097	.2062	.2026	.1989	.1952	.1913	.1874	.1835	.1795
.0400	.1805	.1774	.1742	.1710	.1677	.1643	.1609	.1574	.1538	.1503	.1466
.0500	.1552	.1523	.1494	.1464	.1433	.1402	.1371	.1338	.1306	.1273	.1240
.0600	.1363	.1336	.1309	.1281	.1252	.1223	.1194	.1164	.1134	.1104	.1073
.0700	.1216	.1190	.1165	.1139	.1113	.1085	.1058	.1030	.1003	.0975	.0946
.0800	.1098	.1074	.1050	.1025	.1001	.0975	.0950	.0924	.0898	.0872	.0845
.0900	.1001	.0978	.0956	.0933	.0909	.0885	.0862	.0837	.0813	.0788	.0763
.1000	.0920	.0899	.0877	.0855	.0833	.0811	.0788	.0765	.0742	.0719	.0695

TABLE 101. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8747	.8738	.8729	.8720	.8714	.8710	.8700	.8689	.8677	.8670	.8665	.8652
.0002	.8284	.8273	.8261	.8249	.8241	.8235	.8222	.8207	.8192	.8182	.8176	.8159
.0003	.7949	.7936	.7922	.7908	.7899	.7892	.7876	.7860	.7841	.7831	.7823	.7803
.0004	.7679	.7665	.7650	.7634	.7624	.7617	.7599	.7580	.7560	.7548	.7540	.7518
.0005	.7451	.7436	.7419	.7402	.7391	.7383	.7364	.7344	.7322	.7309	.7300	.7277
.0006	.7252	.7235	.7218	.7200	.7188	.7180	.7160	.7138	.7115	.7102	.7092	.7067
.0007	.7074	.7057	.7039	.7020	.7008	.6999	.6977	.6955	.6931	.6917	.6907	.6880
.0008	.6914	.6896	.6877	.6857	.6844	.6835	.6813	.6790	.6765	.6750	.6739	.6712
.0009	.6767	.6748	.6729	.6708	.6695	.6686	.6663	.6639	.6613	.6597	.6587	.6558
.0010	.6632	.6613	.6592	.6571	.6558	.6548	.6525	.6500	.6473	.6457	.6446	.6417
.0020	.5653	.5630	.5607	.5582	.5566	.5555	.5527	.5498	.5467	.5449	.5436	.5402
.0030	.5020	.4996	.4971	.4945	.4928	.4916	.4886	.4856	.4823	.4803	.4789	.4753
.0040	.4553	.4529	.4503	.4476	.4458	.4446	.4416	.4384	.4350	.4330	.4316	.4279
.0050	.4186	.4161	.4134	.4107	.4089	.4077	.4046	.4014	.3980	.3960	.3946	.3909
.0060	.3885	.3860	.3833	.3806	.3788	.3775	.3745	.3713	.3679	.3658	.3644	.3607
.0070	.3631	.3606	.3580	.3552	.3534	.3522	.3491	.3460	.3426	.3405	.3391	.3354
.0080	.3413	.3388	.3362	.3335	.3317	.3305	.3274	.3243	.3209	.3189	.3175	.3139
.0090	.3223	.3199	.3173	.3145	.3128	.3116	.3086	.3054	.3021	.3001	.2987	.2951
.0100	.3056	.3031	.3005	.2978	.2961	.2949	.2919	.2889	.2856	.2836	.2822	.2787
.0200	.2034	.2012	.1990	.1966	.1951	.1941	.1915	.1888	.1860	.1843	.1831	.1801
.0300	.1529	.1510	.1490	.1470	.1457	.1447	.1425	.1402	.1377	.1363	.1353	.1326
.0400	.1221	.1204	.1187	.1169	.1157	.1149	.1129	.1109	.1087	.1075	.1066	.1043
.0500	.1013	.0998	.0982	.0966	.0956	.0948	.0931	.0913	.0893	.0882	.0874	.0854
.0600	.0862	.0848	.0834	.0820	.0810	.0804	.0788	.0772	.0755	.0744	.0737	.0719
.0700	.0748	.0736	.0723	.0710	.0701	.0695	.0681	.0666	.0650	.0641	.0635	.0619
.0800	.0659	.0648	.0636	.0624	.0616	.0611	.0597	.0584	.0570	.0561	.0555	.0540
.0900	.0588	.0577	.0566	.0555	.0548	.0543	.0531	.0518	.0505	.0497	.0492	.0478
.1000	.0529	.0519	.0509	.0499	.0492	.0488	.0476	.0465	.0453	.0445	.0441	.0428

TABLE 101. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8639	.8625	.8611	.8596	.8581	.8564	.8548	.8530	.8512	.8494	.8474
.0002	.8141	.8123	.8104	.8084	.8064	.8043	.8021	.7998	.7974	.7950	.7924
.0003	.7783	.7761	.7739	.7717	.7693	.7668	.7643	.7616	.7589	.7561	.7531
.0004	.7495	.7472	.7447	.7422	.7396	.7369	.7341	.7311	.7281	.7250	.7217
.0005	.7253	.7227	.7201	.7174	.7146	.7116	.7086	.7054	.7022	.6989	.6954
.0006	.7041	.7014	.6987	.6958	.6928	.6897	.6865	.6832	.6797	.6763	.6725
.0007	.6854	.6825	.6796	.6766	.6735	.6703	.6669	.6634	.6598	.6562	.6523
.0008	.6684	.6655	.6625	.6593	.6561	.6528	.6493	.6457	.6420	.6382	.6341
.0009	.6530	.6499	.6468	.6436	.6403	.6368	.6332	.6295	.6257	.6218	.6176
.0010	.6388	.6356	.6324	.6291	.6257	.6221	.6185	.6146	.6107	.6067	.6025
.0020	.5368	.5331	.5295	.5256	.5217	.5176	.5134	.5090	.5046	.5000	.4952
.0030	.4717	.4679	.4640	.4600	.4559	.4516	.4472	.4426	.4379	.4332	.4281
.0040	.4242	.4203	.4164	.4123	.4081	.4037	.3992	.3945	.3898	.3850	.3800
.0050	.3871	.3832	.3792	.3751	.3709	.3665	.3620	.3574	.3527	.3479	.3428
.0060	.3570	.3530	.3491	.3450	.3408	.3364	.3320	.3274	.3227	.3180	.3130
.0070	.3318	.3278	.3239	.3199	.3157	.3114	.3070	.3024	.2978	.2932	.2883
.0080	.3102	.3063	.3025	.2984	.2944	.2901	.2858	.2813	.2768	.2722	.2674
.0090	.2915	.2877	.2839	.2799	.2759	.2717	.2675	.2630	.2586	.2541	.2494
.0100	.2751	.2713	.2676	.2637	.2597	.2556	.2514	.2471	.2427	.2383	.2337
.0200	.1771	.1739	.1707	.1674	.1641	.1607	.1572	.1536	.1501	.1465	.1428
.0300	.1300	.1273	.1246	.1218	.1190	.1161	.1132	.1102	.1073	.1043	.1012
.0400	.1020	.0997	.0973	.0949	.0925	.0900	.0875	.0850	.0824	.0799	.0773
.0500	.0834	.0813	.0792	.0771	.0750	.0728	.0707	.0684	.0662	.0641	.0618
.0600	.0701	.0683	.0664	.0646	.0627	.0607	.0588	.0568	.0549	.0530	.0510
.0700	.0602	.0585	.0569	.0552	.0535	.0518	.0501	.0483	.0466	.0449	.0431
.0800	.0526	.0510	.0495	.0480	.0465	.0449	.0433	.0418	.0402	.0387	.0371
.0900	.0465	.0451	.0437	.0423	.0409	.0395	.0381	.0366	.0352	.0338	.0324
.1000	.0415	.0402	.0390	.0377	.0364	.0351	.0338	.0325	.0312	.0299	.0286

TABLE 102. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8365	.8354	.8343	.8331	.8324	.8318	.8305	.8291	.8276	.8267	.8261	.8245
.0002	.7780	.7766	.7752	.7736	.7726	.7719	.7702	.7684	.7665	.7653	.7645	.7624
.0003	.7363	.7347	.7331	.7313	.7302	.7294	.7274	.7253	.7231	.7218	.7208	.7184
.0004	.7032	.7015	.6996	.6977	.6965	.6956	.6934	.6912	.6887	.6873	.6862	.6836
.0005	.6755	.6736	.6717	.6696	.6683	.6673	.6650	.6626	.6600	.6584	.6574	.6545
.0006	.6515	.6495	.6475	.6453	.6439	.6429	.6405	.6380	.6352	.6336	.6324	.6295
.0007	.6303	.6283	.6261	.6239	.6224	.6214	.6189	.6162	.6134	.6117	.6105	.6074
.0008	.6113	.6092	.6070	.6047	.6032	.6021	.5995	.5968	.5938	.5921	.5909	.5877
.0009	.5941	.5919	.5896	.5872	.5857	.5846	.5819	.5792	.5761	.5743	.5731	.5698
.0010	.5783	.5761	.5738	.5713	.5697	.5686	.5659	.5630	.5600	.5581	.5568	.5535
.0020	.4674	.4649	.4623	.4596	.4579	.4566	.4536	.4504	.4471	.4450	.4436	.4399
.0030	.3990	.3964	.3938	.3910	.3892	.3880	.3849	.3816	.3782	.3761	.3747	.3710
.0040	.3503	.3478	.3451	.3423	.3406	.3393	.3362	.3330	.3296	.3276	.3262	.3225
.0050	.3131	.3106	.3080	.3053	.3035	.3023	.2993	.2961	.2928	.2908	.2894	.2858
.0060	.2835	.2810	.2784	.2758	.2741	.2729	.2699	.2668	.2636	.2616	.2603	.2568
.0070	.2591	.2567	.2542	.2516	.2499	.2487	.2458	.2429	.2397	.2378	.2365	.2331
.0080	.2386	.2362	.2338	.2312	.2296	.2285	.2257	.2228	.2197	.2179	.2166	.2133
.0090	.2210	.2187	.2164	.2139	.2123	.2112	.2085	.2057	.2027	.2009	.1997	.1965
.0100	.2058	.2036	.2013	.1989	.1974	.1963	.1937	.1909	.1880	.1863	.1851	.1820
.0200	.1196	.1179	.1162	.1143	.1132	.1124	.1104	.1083	.1062	.1049	.1040	.1017
.0300	.0817	.0804	.0790	.0776	.0766	.0760	.0744	.0728	.0711	.0701	.0694	.0676
.0400	.0606	.0595	.0583	.0571	.0564	.0559	.0546	.0533	.0519	.0511	.0505	.0491
.0500	.0472	.0463	.0453	.0443	.0437	.0432	.0422	.0411	.0399	.0393	.0388	.0376
.0600	.0381	.0373	.0365	.0356	.0351	.0347	.0338	.0329	.0319	.0313	.0309	.0299
.0700	.0315	.0308	.0301	.0294	.0289	.0286	.0278	.0270	.0262	.0257	.0253	.0245
.0800	.0266	.0260	.0254	.0247	.0243	.0240	.0234	.0226	.0219	.0215	.0212	.0204
.0900	.0229	.0223	.0217	.0212	.0208	.0206	.0199	.0193	.0187	.0183	.0180	.0174
.1000	.0199	.0194	.0189	.0184	.0180	.0178	.0173	.0167	.0161	.0158	.0156	.0150

TABLE 102. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8228	.8210	.8192	.8173	.8154	.8133	.8112	.8090	.8067	.8044	.8019
.0002	.7602	.7579	.7556	.7531	.7506	.7480	.7452	.7424	.7394	.7365	.7333
.0003	.7159	.7133	.7106	.7078	.7049	.7019	.6988	.6955	.6922	.6888	.6851
.0004	.6809	.6780	.6751	.6720	.6689	.6656	.6622	.6586	.6550	.6513	.6474
.0005	.6516	.6485	.6454	.6422	.6389	.6353	.6318	.6280	.6241	.6202	.6160
.0006	.6264	.6232	.6199	.6165	.6131	.6094	.6056	.6017	.5977	.5936	.5892
.0007	.6043	.6009	.5975	.5940	.5904	.5866	.5827	.5786	.5745	.5702	.5657
.0008	.5844	.5810	.5775	.5739	.5702	.5662	.5622	.5580	.5538	.5494	.5448
.0009	.5665	.5630	.5594	.5557	.5519	.5479	.5438	.5395	.5351	.5307	.5260
.0010	.5501	.5465	.5429	.5391	.5352	.5311	.5270	.5226	.5182	.5136	.5088
.0020	.4362	.4323	.4283	.4242	.4200	.4156	.4111	.4064	.4017	.3969	.3918
.0030	.3672	.3632	.3592	.3551	.3509	.3464	.3419	.3373	.3325	.3278	.3227
.0040	.3188	.3148	.3109	.3068	.3027	.2983	.2939	.2894	.2848	.2801	.2752
.0050	.2822	.2783	.2745	.2705	.2665	.2623	.2580	.2536	.2492	.2447	.2400
.0060	.2532	.2495	.2458	.2420	.2381	.2340	.2299	.2256	.2213	.2170	.2125
.0070	.2297	.2261	.2225	.2187	.2150	.2111	.2071	.2030	.1989	.1948	.1904
.0080	.2100	.2065	.2030	.1994	.1958	.1920	.1882	.1843	.1804	.1764	.1722
.0090	.1933	.1899	.1866	.1831	.1796	.1760	.1723	.1685	.1647	.1609	.1570
.0100	.1789	.1757	.1724	.1691	.1657	.1622	.1587	.1550	.1514	.1478	.1439
.0200	.0994	.0970	.0947	.0923	.0898	.0873	.0849	.0823	.0798	.0772	.0746
.0300	.0659	.0640	.0622	.0604	.0585	.0567	.0548	.0529	.0510	.0491	.0472
.0400	.0477	.0462	.0448	.0433	.0418	.0403	.0389	.0373	.0359	.0344	.0329
.0500	.0364	.0352	.0340	.0328	.0316	.0304	.0292	.0280	.0268	.0256	.0244
.0600	.0289	.0279	.0269	.0259	.0249	.0239	.0229	.0219	.0209	.0199	.0189
.0700	.0236	.0227	.0219	.0210	.0202	.0193	.0185	.0176	.0168	.0159	.0151
.0800	.0197	.0189	.0182	.0174	.0167	.0160	.0152	.0145	.0138	.0131	.0124
.0900	.0167	.0160	.0154	.0147	.0141	.0134	.0128	.0122	.0115	.0109	.0103
.1000	.0144	.0138	.0132	.0126	.0121	.0115	.0109	.0104	.0098	.0093	.0087

TABLE 103. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881
.0002	.9844	.9843	.9842	.9841	.9840	.9840	.9838	.9837	.9836	.9835	.9834	.9833
.0003	.9811	.9809	.9808	.9806	.9806	.9805	.9803	.9802	.9800	.9799	.9798	.9796
.0004	.9782	.9781	.9779	.9778	.9777	.9776	.9774	.9772	.9770	.9769	.9768	.9766
.0005	.9758	.9756	.9754	.9753	.9751	.9751	.9749	.9747	.9744	.9743	.9742	.9740
.0006	.9736	.9734	.9732	.9730	.9729	.9728	.9726	.9724	.9721	.9720	.9719	.9716
.0007	.9716	.9714	.9712	.9710	.9708	.9707	.9705	.9703	.9700	.9698	.9697	.9695
.0008	.9697	.9695	.9693	.9691	.9689	.9688	.9686	.9683	.9680	.9679	.9678	.9675
.0009	.9680	.9678	.9675	.9673	.9671	.9670	.9668	.9665	.9662	.9660	.9659	.9656
.0010	.9664	.9661	.9659	.9656	.9655	.9654	.9651	.9648	.9645	.9643	.9642	.9639
.0020	.9536	.9533	.9529	.9526	.9524	.9522	.9519	.9515	.9511	.9508	.9506	.9502
.0030	.9442	.9438	.9434	.9430	.9428	.9426	.9421	.9417	.9412	.9409	.9407	.9402
.0040	.9365	.9361	.9357	.9352	.9349	.9347	.9342	.9337	.9332	.9328	.9326	.9320
.0050	.9300	.9295	.9291	.9285	.9282	.9280	.9275	.9269	.9263	.9259	.9257	.9250
.0060	.9242	.9237	.9232	.9227	.9223	.9221	.9215	.9209	.9203	.9199	.9196	.9189
.0070	.9190	.9185	.9180	.9174	.9170	.9168	.9162	.9155	.9148	.9144	.9141	.9134
.0080	.9143	.9138	.9132	.9126	.9122	.9119	.9113	.9106	.9099	.9094	.9091	.9083
.0090	.9100	.9094	.9088	.9081	.9078	.9075	.9068	.9061	.9053	.9048	.9045	.9037
.0100	.9059	.9053	.9047	.9040	.9036	.9033	.9026	.9019	.9011	.9006	.9003	.8994
.0200	.8757	.8749	.8741	.8733	.8728	.8724	.8715	.8705	.8695	.8689	.8685	.8674
.0300	.8551	.8542	.8533	.8524	.8518	.8513	.8503	.8492	.8481	.8473	.8469	.8456
.0400	.8392	.8383	.8373	.8362	.8356	.8351	.8340	.8328	.8315	.8308	.8302	.8289
.0500	.8263	.8252	.8242	.8231	.8224	.8219	.8207	.8194	.8181	.8172	.8167	.8152
.0600	.8153	.8142	.8131	.8119	.8112	.8107	.8094	.8080	.8067	.8058	.8052	.8037
.0700	.8057	.8046	.8034	.8022	.8015	.8009	.7996	.7982	.7967	.7959	.7952	.7937
.0800	.7972	.7961	.7949	.7936	.7929	.7923	.7909	.7895	.7880	.7871	.7864	.7848
.0900	.7896	.7885	.7872	.7859	.7852	.7846	.7832	.7817	.7802	.7792	.7786	.7769
.1000	.7828	.7816	.7803	.7790	.7782	.7776	.7762	.7746	.7731	.7721	.7714	.7697

TABLE 103. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9880	.9878	.9877	.9876	.9875	.9873	.9872	.9870	.9869	.9867	.9866
.0002	.9831	.9829	.9828	.9826	.9824	.9822	.9820	.9818	.9816	.9814	.9812
.0003	.9794	.9792	.9790	.9788	.9786	.9784	.9782	.9779	.9777	.9774	.9771
.0004	.9764	.9762	.9759	.9757	.9754	.9752	.9749	.9746	.9743	.9740	.9737
.0005	.9737	.9735	.9732	.9730	.9727	.9724	.9721	.9718	.9715	.9711	.9708
.0006	.9714	.9711	.9708	.9705	.9702	.9699	.9696	.9692	.9689	.9685	.9681
.0007	.9692	.9689	.9686	.9683	.9679	.9676	.9673	.9669	.9665	.9661	.9657
.0008	.9672	.9669	.9665	.9662	.9659	.9655	.9651	.9647	.9643	.9639	.9635
.0009	.9653	.9650	.9646	.9643	.9639	.9635	.9631	.9627	.9623	.9619	.9614
.0010	.9635	.9632	.9628	.9625	.9621	.9617	.9613	.9608	.9604	.9599	.9595
.0020	.9497	.9493	.9488	.9483	.9478	.9472	.9467	.9461	.9455	.9449	.9442
.0030	.9396	.9391	.9385	.9379	.9373	.9366	.9360	.9353	.9345	.9338	.9330
.0040	.9314	.9308	.9301	.9294	.9287	.9280	.9273	.9265	.9257	.9248	.9240
.0050	.9244	.9237	.9229	.9222	.9214	.9206	.9198	.9190	.9181	.9172	.9162
.0060	.9182	.9174	.9166	.9158	.9150	.9142	.9133	.9124	.9114	.9104	.9094
.0070	.9126	.9118	.9110	.9101	.9092	.9083	.9074	.9064	.9054	.9044	.9033
.0080	.9075	.9067	.9058	.9049	.9040	.9030	.9021	.9010	.9000	.8989	.8977
.0090	.9029	.9020	.9011	.9001	.8992	.8982	.8971	.8961	.8950	.8938	.8926
.0100	.8985	.8976	.8967	.8957	.8947	.8937	.8926	.8915	.8903	.8891	.8879
.0200	.8663	.8651	.8639	.8626	.8614	.8600	.8587	.8572	.8558	.8542	.8526
.0300	.8443	.8430	.8416	.8402	.8388	.8373	.8357	.8341	.8324	.8307	.8289
.0400	.8275	.8260	.8246	.8230	.8214	.8198	.8181	.8163	.8145	.8126	.8106
.0500	.8138	.8122	.8106	.8090	.8073	.8055	.8037	.8019	.7999	.7979	.7958
.0600	.8021	.8005	.7989	.7971	.7953	.7935	.7916	.7897	.7876	.7855	.7833
.0700	.7921	.7904	.7886	.7868	.7850	.7831	.7811	.7791	.7770	.7748	.7725
.0800	.7831	.7814	.7796	.7778	.7759	.7739	.7719	.7697	.7676	.7653	.7630
.0900	.7752	.7734	.7715	.7696	.7677	.7657	.7636	.7614	.7592	.7569	.7544
.1000	.7680	.7661	.7642	.7623	.7603	.7582	.7561	.7539	.7516	.7492	.7467

TABLE 104. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9779	.9778	.9776	.9774	.9773	.9773	.9771	.9769	.9767	.9766	.9765	.9763
.0002	.9691	.9689	.9687	.9684	.9683	.9682	.9679	.9677	.9674	.9672	.9671	.9668
.0003	.9625	.9622	.9619	.9617	.9615	.9614	.9611	.9607	.9604	.9602	.9601	.9597
.0004	.9569	.9566	.9563	.9560	.9558	.9557	.9553	.9550	.9546	.9544	.9542	.9538
.0005	.9521	.9518	.9515	.9511	.9509	.9507	.9504	.9500	.9495	.9493	.9491	.9486
.0006	.9478	.9475	.9471	.9467	.9465	.9463	.9459	.9455	.9450	.9447	.9445	.9440
.0007	.9439	.9436	.9432	.9428	.9425	.9423	.9419	.9414	.9409	.9406	.9404	.9399
.0008	.9403	.9399	.9395	.9391	.9388	.9386	.9381	.9376	.9371	.9368	.9366	.9360
.0009	.9370	.9366	.9361	.9357	.9354	.9352	.9347	.9341	.9336	.9332	.9330	.9324
.0010	.9338	.9334	.9329	.9324	.9321	.9319	.9314	.9309	.9303	.9299	.9297	.9291
.0020	.9093	.9087	.9081	.9074	.9070	.9067	.9060	.9053	.9045	.9040	.9037	.9029
.0030	.8915	.8908	.8901	.8893	.8888	.8885	.8876	.8868	.8859	.8853	.8849	.8839
.0040	.8771	.8763	.8755	.8746	.8741	.8737	.8728	.8718	.8708	.8702	.8697	.8686
.0050	.8649	.8640	.8631	.8622	.8616	.8612	.8602	.8591	.8580	.8573	.8569	.8557
.0060	.8542	.8533	.8523	.8513	.8507	.8503	.8492	.8480	.8469	.8461	.8456	.8443
.0070	.8446	.8437	.8427	.8416	.8410	.8405	.8393	.8381	.8369	.8361	.8356	.8342
.0080	.8360	.8350	.8339	.8328	.8321	.8316	.8304	.8292	.8279	.8270	.8265	.8251
.0090	.8280	.8270	.8259	.8247	.8240	.8235	.8223	.8209	.8196	.8187	.8182	.8167
.0100	.8207	.8196	.8185	.8173	.8165	.8160	.8147	.8134	.8119	.8111	.8105	.8089
.0200	.7669	.7655	.7641	.7626	.7617	.7611	.7595	.7578	.7561	.7550	.7542	.7523
.0300	.7312	.7297	.7282	.7265	.7255	.7248	.7230	.7211	.7192	.7180	.7172	.7151
.0400	.7043	.7027	.7011	.6993	.6982	.6974	.6955	.6935	.6915	.6902	.6893	.6871
.0500	.6827	.6810	.6793	.6774	.6763	.6755	.6735	.6714	.6692	.6679	.6670	.6646
.0600	.6646	.6629	.6611	.6592	.6580	.6572	.6551	.6529	.6507	.6493	.6483	.6459
.0700	.6491	.6473	.6455	.6435	.6423	.6414	.6393	.6371	.6348	.6334	.6324	.6299
.0800	.6356	.6337	.6318	.6298	.6286	.6277	.6256	.6233	.6209	.6195	.6185	.6159
.0900	.6235	.6217	.6198	.6177	.6165	.6156	.6134	.6110	.6086	.6072	.6061	.6035
.1000	.6127	.6108	.6089	.6068	.6056	.6046	.6024	.6001	.5976	.5961	.5951	.5924

TABLE 104. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9761	.9758	.9756	.9753	.9751	.9748	.9745	.9743	.9740	.9737	.9733
.0002	.9665	.9662	.9658	.9655	.9651	.9648	.9644	.9640	.9636	.9632	.9627
.0003	.9593	.9589	.9585	.9581	.9577	.9572	.9568	.9563	.9558	.9553	.9548
.0004	.9534	.9529	.9524	.9520	.9515	.9510	.9505	.9499	.9493	.9488	.9481
.0005	.9482	.9477	.9472	.9466	.9461	.9455	.9450	.9443	.9437	.9431	.9424
.0006	.9435	.9430	.9424	.9419	.9413	.9407	.9400	.9394	.9387	.9380	.9373
.0007	.9393	.9387	.9381	.9375	.9369	.9363	.9356	.9349	.9341	.9334	.9326
.0008	.9354	.9348	.9342	.9335	.9329	.9322	.9315	.9307	.9299	.9292	.9283
.0009	.9318	.9312	.9305	.9298	.9291	.9284	.9276	.9268	.9260	.9252	.9243
.0010	.9284	.9277	.9270	.9263	.9256	.9248	.9240	.9232	.9224	.9215	.9206
.0020	.9020	.9011	.9002	.8992	.8982	.8972	.8962	.8951	.8939	.8928	.8915
.0030	.8829	.8818	.8808	.8796	.8785	.8773	.8760	.8747	.8734	.8720	.8705
.0040	.8675	.8663	.8651	.8638	.8625	.8612	.8598	.8583	.8568	.8553	.8537
.0050	.8544	.8531	.8518	.8505	.8490	.8476	.8461	.8445	.8429	.8412	.8394
.0060	.8430	.8416	.8402	.8388	.8372	.8357	.8341	.8324	.8307	.8289	.8270
.0070	.8328	.8314	.8299	.8283	.8267	.8251	.8234	.8216	.8198	.8179	.8159
.0080	.8236	.8221	.8205	.8189	.8172	.8155	.8137	.8119	.8099	.8080	.8059
.0090	.8152	.8136	.8119	.8103	.8085	.8067	.8049	.8029	.8009	.7989	.7967
.0100	.8074	.8057	.8040	.8023	.8005	.7986	.7967	.7947	.7926	.7905	.7883
.0200	.7504	.7484	.7463	.7442	.7419	.7397	.7373	.7348	.7323	.7297	.7270
.0300	.7129	.7107	.7084	.7060	.7035	.7010	.6984	.6957	.6929	.6900	.6870
.0400	.6848	.6824	.6799	.6774	.6747	.6720	.6693	.6664	.6634	.6604	.6571
.0500	.6622	.6597	.6571	.6545	.6517	.6489	.6460	.6430	.6399	.6367	.6334
.0600	.6434	.6408	.6382	.6354	.6326	.6297	.6267	.6235	.6203	.6171	.6136
.0700	.6274	.6247	.6219	.6191	.6162	.6132	.6102	.6070	.6037	.6003	.5968
.0800	.6133	.6106	.6078	.6049	.6019	.5989	.5958	.5925	.5892	.5857	.5821
.0900	.6009	.5981	.5953	.5924	.5893	.5862	.5831	.5797	.5763	.5729	.5692
.1000	.5898	.5869	.5841	.5811	.5780	.5749	.5717	.5683	.5649	.5614	.5576

TABLE 105. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9671	.9668	.9666	.9664	.9662	.9661	.9658	.9655	.9653	.9651	.9649	.9646
.0002	.9540	.9537	.9534	.9530	.9528	.9527	.9523	.9519	.9515	.9512	.9511	.9506
.0003	.9442	.9438	.9435	.9430	.9428	.9426	.9422	.9417	.9412	.9409	.9407	.9401
.0004	.9361	.9357	.9352	.9348	.9345	.9343	.9338	.9332	.9327	.9323	.9321	.9315
.0005	.9291	.9286	.9281	.9276	.9273	.9270	.9265	.9259	.9253	.9249	.9246	.9239
.0006	.9228	.9223	.9217	.9212	.9208	.9206	.9200	.9193	.9187	.9183	.9180	.9172
.0007	.9171	.9165	.9160	.9154	.9150	.9147	.9141	.9134	.9127	.9122	.9119	.9112
.0008	.9119	.9113	.9107	.9100	.9096	.9093	.9087	.9079	.9072	.9067	.9064	.9056
.0009	.9070	.9064	.9057	.9050	.9046	.9043	.9036	.9028	.9021	.9016	.9012	.9004
.0010	.9024	.9018	.9011	.9004	.9000	.8996	.8989	.8981	.8973	.8967	.8964	.8955
.0020	.8671	.8662	.8653	.8644	.8638	.8634	.8624	.8614	.8603	.8596	.8591	.8579
.0030	.8417	.8407	.8397	.8386	.8380	.8375	.8363	.8351	.8338	.8330	.8324	.8310
.0040	.8215	.8203	.8192	.8180	.8172	.8167	.8154	.8140	.8126	.8117	.8111	.8096
.0050	.8044	.8031	.8019	.8006	.7998	.7992	.7978	.7963	.7948	.7938	.7932	.7915
.0060	.7895	.7882	.7869	.7855	.7846	.7840	.7825	.7810	.7793	.7783	.7776	.7758
.0070	.7763	.7749	.7735	.7721	.7712	.7705	.7690	.7673	.7656	.7645	.7638	.7619
.0080	.7644	.7630	.7615	.7600	.7591	.7584	.7568	.7550	.7532	.7521	.7514	.7494
.0090	.7535	.7520	.7505	.7490	.7480	.7473	.7456	.7438	.7420	.7408	.7400	.7380
.0100	.7435	.7420	.7405	.7388	.7378	.7371	.7354	.7335	.7316	.7304	.7296	.7276
.0200	.6716	.6698	.6679	.6660	.6648	.6640	.6619	.6597	.6574	.6560	.6550	.6526
.0300	.6253	.6233	.6214	.6192	.6180	.6170	.6148	.6124	.6099	.6084	.6073	.6047
.0400	.5911	.5891	.5870	.5848	.5834	.5824	.5801	.5776	.5750	.5734	.5723	.5695
.0500	.5641	.5620	.5598	.5576	.5562	.5552	.5527	.5501	.5475	.5458	.5447	.5418
.0600	.5418	.5397	.5375	.5352	.5338	.5327	.5302	.5276	.5249	.5232	.5221	.5191
.0700	.5230	.5208	.5186	.5162	.5148	.5137	.5112	.5085	.5058	.5041	.5029	.4999
.0800	.5067	.5045	.5022	.4998	.4984	.4973	.4948	.4921	.4893	.4876	.4864	.4834
.0900	.4924	.4902	.4879	.4855	.4840	.4829	.4804	.4776	.4748	.4731	.4719	.4689
.1000	.4796	.4774	.4751	.4727	.4712	.4702	.4676	.4648	.4620	.4603	.4591	.4560

TABLE 105. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9643	.9639	.9636	.9632	.9629	.9625	.9621	.9616	.9612	.9607	.9603
.0002	.9502	.9497	.9492	.9487	.9482	.9476	.9471	.9465	.9459	.9453	.9446
.0003	.9396	.9390	.9384	.9378	.9372	.9365	.9359	.9352	.9344	.9337	.9329
.0004	.9308	.9302	.9295	.9288	.9281	.9274	.9266	.9258	.9250	.9241	.9232
.0005	.9233	.9225	.9218	.9210	.9202	.9194	.9186	.9177	.9168	.9158	.9149
.0006	.9165	.9157	.9149	.9141	.9132	.9123	.9114	.9105	.9095	.9085	.9074
.0007	.9104	.9095	.9087	.9078	.9069	.9059	.9049	.9039	.9029	.9018	.9006
.0008	.9047	.9038	.9029	.9020	.9010	.9000	.8990	.8979	.8968	.8956	.8944
.0009	.8995	.8985	.8976	.8966	.8956	.8945	.8934	.8923	.8911	.8899	.8887
.0010	.8946	.8936	.8926	.8916	.8905	.8894	.8883	.8871	.8858	.8846	.8833
.0020	.8567	.8554	.8541	.8527	.8513	.8499	.8484	.8468	.8452	.8435	.8418
.0030	.8296	.8281	.8266	.8250	.8233	.8216	.8199	.8181	.8162	.8143	.8122
.0040	.8080	.8063	.8046	.8029	.8010	.7992	.7972	.7952	.7931	.7910	.7888
.0050	.7898	.7880	.7862	.7843	.7823	.7803	.7782	.7760	.7738	.7715	.7691
.0060	.7740	.7721	.7702	.7682	.7661	.7639	.7617	.7594	.7571	.7546	.7521
.0070	.7600	.7580	.7560	.7539	.7517	.7495	.7471	.7447	.7422	.7397	.7370
.0080	.7475	.7454	.7432	.7410	.7388	.7364	.7340	.7315	.7289	.7263	.7235
.0090	.7360	.7338	.7316	.7293	.7270	.7246	.7221	.7195	.7168	.7141	.7112
.0100	.7254	.7232	.7210	.7186	.7162	.7137	.7111	.7084	.7057	.7029	.6999
.0200	.6501	.6474	.6447	.6419	.6391	.6361	.6331	.6299	.6267	.6234	.6199
.0300	.6020	.5991	.5962	.5932	.5901	.5869	.5836	.5802	.5767	.5732	.5694
.0400	.5667	.5637	.5606	.5575	.5542	.5509	.5475	.5440	.5403	.5366	.5327
.0500	.5389	.5358	.5327	.5295	.5261	.5227	.5192	.5156	.5119	.5081	.5040
.0600	.5161	.5130	.5098	.5065	.5031	.4996	.4961	.4924	.4886	.4847	.4807
.0700	.4969	.4937	.4905	.4872	.4837	.4802	.4766	.4729	.4690	.4651	.4610
.0800	.4803	.4771	.4739	.4705	.4670	.4635	.4599	.4561	.4522	.4483	.4441
.0900	.4658	.4626	.4593	.4559	.4524	.4489	.4452	.4414	.4375	.4336	.4294
.1000	.4529	.4496	.4464	.4430	.4395	.4359	.4322	.4284	.4245	.4206	.4164

TABLE 106. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9563	.9560	.9557	.9554	.9552	.9551	.9547	.9543	.9539	.9537	.9535	.9531
.0002	.9392	.9388	.9383	.9379	.9376	.9374	.9369	.9364	.9359	.9355	.9353	.9347
.0003	.9263	.9258	.9253	.9248	.9245	.9242	.9236	.9230	.9224	.9220	.9217	.9210
.0004	.9157	.9152	.9146	.9140	.9136	.9133	.9127	.9120	.9112	.9108	.9105	.9097
.0005	.9066	.9060	.9053	.9046	.9042	.9039	.9032	.9024	.9016	.9011	.9008	.8999
.0006	.8984	.8977	.8970	.8963	.8959	.8955	.8948	.8939	.8931	.8925	.8921	.8912
.0007	.8910	.8903	.8896	.8888	.8883	.8880	.8871	.8862	.8853	.8847	.8843	.8833
.0008	.8842	.8835	.8827	.8819	.8814	.8810	.8801	.8792	.8782	.8776	.8772	.8761
.0009	.8779	.8771	.8763	.8754	.8749	.8745	.8736	.8726	.8716	.8709	.8705	.8694
.0010	.8720	.8712	.8704	.8694	.8689	.8685	.8675	.8665	.8654	.8648	.8643	.8631
.0020	.8268	.8257	.8246	.8234	.8227	.8222	.8209	.8196	.8182	.8173	.8167	.8152
.0030	.7948	.7935	.7922	.7908	.7900	.7894	.7879	.7864	.7847	.7837	.7831	.7813
.0040	.7693	.7679	.7665	.7650	.7641	.7634	.7618	.7601	.7583	.7572	.7565	.7545
.0050	.7480	.7466	.7450	.7434	.7424	.7417	.7400	.7381	.7362	.7350	.7342	.7322
.0060	.7297	.7281	.7265	.7247	.7237	.7229	.7211	.7192	.7172	.7159	.7151	.7129
.0070	.7134	.7118	.7101	.7083	.7072	.7064	.7045	.7025	.7004	.6991	.6982	.6959
.0080	.6989	.6972	.6954	.6935	.6924	.6916	.6896	.6875	.6853	.6840	.6831	.6807
.0090	.6856	.6839	.6821	.6802	.6790	.6782	.6761	.6740	.6717	.6703	.6694	.6670
.0100	.6735	.6717	.6699	.6679	.6667	.6659	.6638	.6615	.6592	.6578	.6569	.6544
.0200	.5881	.5860	.5839	.5816	.5802	.5792	.5768	.5743	.5716	.5700	.5689	.5660
.0300	.5347	.5325	.5302	.5278	.5264	.5253	.5227	.5200	.5172	.5155	.5143	.5113
.0400	.4961	.4938	.4915	.4890	.4875	.4864	.4838	.4810	.4781	.4764	.4752	.4721
.0500	.4661	.4638	.4614	.4589	.4574	.4563	.4536	.4508	.4479	.4461	.4449	.4417
.0600	.4417	.4394	.4370	.4345	.4330	.4319	.4292	.4263	.4234	.4216	.4204	.4172
.0700	.4214	.4190	.4167	.4141	.4126	.4115	.4088	.4059	.4030	.4012	.3999	.3968
.0800	.4040	.4016	.3992	.3967	.3952	.3940	.3913	.3885	.3856	.3838	.3825	.3794
.0900	.3888	.3865	.3841	.3815	.3800	.3789	.3762	.3734	.3704	.3686	.3674	.3643
.1000	.3755	.3731	.3708	.3682	.3667	.3656	.3629	.3601	.3572	.3554	.3541	.3510

TABLE 106. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9527	.9522	.9518	.9513	.9508	.9503	.9497	.9492	.9486	.9480	.9474
.0002	.9341	.9335	.9329	.9322	.9315	.9308	.9301	.9293	.9285	.9277	.9268
.0003	.9203	.9195	.9188	.9180	.9172	.9163	.9154	.9145	.9136	.9126	.9116
.0004	.9089	.9080	.9072	.9063	.9053	.9044	.9034	.9023	.9012	.9001	.8990
.0005	.8990	.8981	.8971	.8961	.8951	.8940	.8929	.8918	.8906	.8894	.8881
.0006	.8902	.8892	.8882	.8871	.8860	.8849	.8837	.8824	.8812	.8799	.8785
.0007	.8823	.8812	.8801	.8790	.8778	.8766	.8753	.8740	.8726	.8712	.8698
.0008	.8750	.8739	.8727	.8715	.8702	.8690	.8676	.8662	.8648	.8633	.8618
.0009	.8683	.8671	.8658	.8646	.8633	.8619	.8605	.8590	.8575	.8560	.8544
.0010	.8619	.8607	.8594	.8581	.8567	.8553	.8539	.8523	.8508	.8492	.8475
.0020	.8136	.8120	.8103	.8086	.8068	.8050	.8031	.8011	.7991	.7970	.7948
.0030	.7795	.7776	.7757	.7737	.7717	.7696	.7674	.7651	.7628	.7604	.7578
.0040	.7526	.7505	.7484	.7462	.7440	.7416	.7392	.7368	.7342	.7316	.7288
.0050	.7301	.7279	.7256	.7233	.7209	.7184	.7158	.7132	.7104	.7076	.7046
.0060	.7107	.7083	.7060	.7035	.7010	.6984	.6957	.6929	.6900	.6870	.6839
.0070	.6936	.6912	.6887	.6861	.6835	.6808	.6780	.6750	.6720	.6690	.6657
.0080	.6783	.6758	.6732	.6706	.6678	.6650	.6621	.6591	.6560	.6528	.6495
.0090	.6645	.6619	.6592	.6565	.6537	.6508	.6478	.6447	.6415	.6382	.6348
.0100	.6518	.6492	.6465	.6437	.6408	.6378	.6347	.6316	.6283	.6249	.6214
.0200	.5631	.5601	.5570	.5538	.5505	.5471	.5436	.5400	.5363	.5325	.5285
.0300	.5083	.5050	.5018	.4984	.4949	.4914	.4878	.4840	.4801	.4761	.4720
.0400	.4689	.4656	.4623	.4588	.4553	.4516	.4479	.4441	.4401	.4361	.4318
.0500	.4385	.4352	.4318	.4283	.4247	.4211	.4173	.4134	.4094	.4054	.4011
.0600	.4140	.4106	.4073	.4038	.4001	.3965	.3927	.3888	.3848	.3808	.3765
.0700	.3936	.3902	.3868	.3833	.3797	.3760	.3723	.3684	.3644	.3604	.3561
.0800	.3762	.3728	.3694	.3659	.3623	.3587	.3549	.3511	.3471	.3431	.3389
.0900	.3611	.3577	.3544	.3509	.3473	.3437	.3400	.3361	.3322	.3282	.3240
.1000	.3478	.3445	.3411	.3377	.3341	.3305	.3268	.3230	.3191	.3151	.3110

TABLE 107. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9352	.9348	.9343	.9338	.9336	.9333	.9328	.9323	.9317	.9314	.9311	.9305
.0002	.9102	.9095	.9089	.9083	.9079	.9076	.9069	.9061	.9054	.9049	.9045	.9037
.0003	.8916	.8908	.8901	.8893	.8888	.8885	.8877	.8868	.8858	.8853	.8849	.8839
.0004	.8763	.8755	.8747	.8738	.8732	.8728	.8719	.8709	.8699	.8692	.8688	.8676
.0005	.8632	.8623	.8614	.8604	.8598	.8594	.8583	.8573	.8561	.8554	.8549	.8537
.0006	.8516	.8506	.8496	.8486	.8479	.8475	.8464	.8452	.8439	.8432	.8427	.8413
.0007	.8411	.8401	.8390	.8379	.8372	.8367	.8355	.8343	.8330	.8322	.8316	.8302
.0008	.8315	.8304	.8293	.8281	.8274	.8269	.8256	.8243	.8230	.8221	.8215	.8200
.0009	.8226	.8215	.8203	.8191	.8184	.8178	.8165	.8151	.8137	.8128	.8122	.8106
.0010	.8143	.8132	.8120	.8107	.8099	.8094	.8080	.8066	.8051	.8041	.8035	.8019
.0020	.7519	.7504	.7488	.7472	.7462	.7455	.7438	.7420	.7401	.7389	.7381	.7360
.0030	.7085	.7068	.7051	.7033	.7022	.7013	.6994	.6973	.6952	.6938	.6929	.6906
.0040	.6748	.6730	.6711	.6691	.6679	.6670	.6649	.6627	.6603	.6589	.6579	.6554
.0050	.6470	.6450	.6431	.6410	.6397	.6388	.6365	.6342	.6317	.6302	.6292	.6265
.0060	.6233	.6213	.6192	.6170	.6157	.6147	.6124	.6099	.6073	.6058	.6047	.6019
.0070	.6026	.6005	.5984	.5961	.5947	.5937	.5913	.5888	.5861	.5845	.5834	.5806
.0080	.5842	.5821	.5799	.5776	.5762	.5751	.5727	.5701	.5674	.5657	.5646	.5616
.0090	.5677	.5656	.5633	.5609	.5595	.5585	.5559	.5533	.5505	.5488	.5477	.5447
.0100	.5528	.5506	.5483	.5459	.5444	.5433	.5408	.5381	.5353	.5335	.5324	.5293
.0200	.4510	.4486	.4461	.4435	.4420	.4408	.4381	.4352	.4322	.4303	.4291	.4258
.0300	.3910	.3886	.3861	.3835	.3819	.3807	.3779	.3750	.3720	.3701	.3689	.3656
.0400	.3494	.3470	.3446	.3419	.3404	.3392	.3365	.3336	.3306	.3288	.3275	.3243
.0500	.3182	.3158	.3134	.3109	.3093	.3082	.3055	.3027	.2997	.2979	.2967	.2936
.0600	.2936	.2913	.2889	.2864	.2849	.2838	.2812	.2784	.2755	.2737	.2725	.2695
.0700	.2735	.2713	.2689	.2665	.2650	.2639	.2613	.2586	.2558	.2541	.2529	.2499
.0800	.2567	.2545	.2523	.2498	.2484	.2473	.2448	.2421	.2394	.2377	.2366	.2337
.0900	.2424	.2403	.2380	.2357	.2343	.2332	.2308	.2281	.2255	.2238	.2227	.2198
.1000	.2301	.2279	.2258	.2234	.2221	.2210	.2186	.2161	.2134	.2118	.2107	.2079

TABLE 107. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9299	.9292	.9285	.9278	.9271	.9263	.9256	.9247	.9239	.9230	.9221
.0002	.9028	.9019	.9010	.9000	.8991	.8980	.8970	.8959	.8947	.8935	.8923
.0003	.8829	.8818	.8807	.8795	.8783	.8771	.8759	.8745	.8732	.8718	.8703
.0004	.8665	.8653	.8640	.8627	.8614	.8600	.8586	.8571	.8556	.8540	.8524
.0005	.8524	.8511	.8497	.8483	.8468	.8453	.8438	.8422	.8405	.8388	.8370
.0006	.8400	.8385	.8371	.8356	.8340	.8324	.8307	.8290	.8272	.8253	.8234
.0007	.8288	.8272	.8257	.8241	.8224	.8207	.8189	.8171	.8152	.8132	.8111
.0008	.8185	.8169	.8153	.8136	.8118	.8100	.8082	.8062	.8042	.8022	.8000
.0009	.8091	.8074	.8057	.8039	.8021	.8002	.7982	.7962	.7941	.7920	.7897
.0010	.8002	.7985	.7967	.7949	.7930	.7910	.7890	.7869	.7847	.7825	.7801
.0020	.7339	.7317	.7295	.7271	.7247	.7223	.7197	.7171	.7143	.7115	.7086
.0030	.6882	.6857	.6832	.6806	.6779	.6751	.6722	.6693	.6662	.6630	.6597
.0040	.6529	.6502	.6474	.6446	.6417	.6387	.6356	.6324	.6291	.6257	.6222
.0050	.6238	.6210	.6181	.6151	.6120	.6089	.6056	.6022	.5988	.5952	.5915
.0060	.5991	.5962	.5932	.5901	.5869	.5836	.5802	.5767	.5731	.5695	.5656
.0070	.5777	.5746	.5715	.5683	.5651	.5617	.5582	.5546	.5509	.5471	.5432
.0080	.5587	.5556	.5524	.5491	.5458	.5423	.5388	.5351	.5313	.5275	.5234
.0090	.5417	.5385	.5353	.5319	.5285	.5250	.5214	.5177	.5138	.5099	.5058
.0100	.5263	.5230	.5198	.5164	.5129	.5094	.5057	.5019	.4980	.4940	.4899
.0200	.4226	.4191	.4157	.4121	.4084	.4047	.4008	.3968	.3927	.3886	.3842
.0300	.3624	.3589	.3554	.3519	.3482	.3445	.3406	.3367	.3326	.3285	.3242
.0400	.3211	.3177	.3143	.3108	.3072	.3035	.2998	.2959	.2920	.2880	.2838
.0500	.2904	.2871	.2838	.2803	.2768	.2732	.2696	.2658	.2620	.2581	.2541
.0600	.2664	.2631	.2599	.2565	.2531	.2496	.2461	.2424	.2387	.2350	.2310
.0700	.2469	.2437	.2406	.2373	.2340	.2306	.2272	.2236	.2200	.2163	.2125
.0800	.2307	.2276	.2245	.2214	.2181	.2148	.2115	.2080	.2045	.2010	.1973
.0900	.2170	.2140	.2110	.2078	.2047	.2015	.1982	.1948	.1914	.1880	.1844
.1000	.2051	.2022	.1993	.1962	.1931	.1900	.1868	.1836	.1802	.1769	.1734

TABLE 108. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9146	.9140	.9134	.9128	.9124	.9121	.9114	.9107	.9100	.9095	.9092	.9084
.0002	.8820	.8813	.8804	.8796	.8791	.8787	.8778	.8768	.8758	.8752	.8748	.8737
.0003	.8581	.8572	.8562	.8552	.8546	.8542	.8531	.8519	.8508	.8500	.8495	.8482
.0004	.8386	.8375	.8365	.8353	.8347	.8342	.8330	.8317	.8304	.8295	.8290	.8275
.0005	.8219	.8207	.8196	.8184	.8176	.8171	.8157	.8144	.8129	.8120	.8114	.8098
.0006	.8072	.8059	.8047	.8034	.8026	.8020	.8006	.7991	.7975	.7966	.7959	.7943
.0007	.7939	.7926	.7913	.7899	.7891	.7885	.7870	.7854	.7838	.7827	.7820	.7803
.0008	.7819	.7805	.7791	.7777	.7768	.7761	.7746	.7729	.7712	.7701	.7694	.7676
.0009	.7708	.7694	.7679	.7664	.7655	.7648	.7632	.7614	.7597	.7585	.7578	.7559
.0010	.7605	.7590	.7575	.7559	.7550	.7543	.7526	.7508	.7489	.7478	.7470	.7450
.0020	.6837	.6819	.6800	.6780	.6769	.6760	.6739	.6717	.6694	.6680	.6670	.6645
.0030	.6317	.6296	.6276	.6254	.6241	.6231	.6208	.6184	.6158	.6143	.6132	.6104
.0040	.5919	.5897	.5875	.5852	.5838	.5828	.5803	.5777	.5750	.5734	.5722	.5693
.0050	.5596	.5573	.5551	.5526	.5512	.5501	.5475	.5448	.5420	.5403	.5391	.5361
.0060	.5324	.5301	.5277	.5253	.5238	.5227	.5200	.5172	.5143	.5126	.5113	.5082
.0070	.5090	.5066	.5042	.5017	.5002	.4990	.4963	.4935	.4905	.4887	.4875	.4843
.0080	.4884	.4860	.4836	.4810	.4795	.4783	.4756	.4727	.4697	.4679	.4666	.4634
.0090	.4701	.4677	.4652	.4626	.4611	.4599	.4571	.4542	.4512	.4493	.4481	.4448
.0100	.4537	.4512	.4487	.4461	.4445	.4434	.4406	.4376	.4346	.4327	.4315	.4282
.0200	.3459	.3434	.3409	.3383	.3367	.3355	.3327	.3298	.3268	.3249	.3236	.3204
.0300	.2859	.2835	.2811	.2786	.2771	.2759	.2733	.2704	.2675	.2658	.2645	.2615
.0400	.2461	.2438	.2416	.2391	.2377	.2366	.2340	.2314	.2286	.2269	.2258	.2228
.0500	.2172	.2151	.2129	.2106	.2092	.2082	.2058	.2032	.2006	.1990	.1979	.1951
.0600	.1951	.1931	.1910	.1888	.1875	.1865	.1842	.1818	.1793	.1777	.1767	.1741
.0700	.1776	.1756	.1736	.1715	.1702	.1693	.1671	.1648	.1624	.1609	.1599	.1574
.0800	.1632	.1613	.1594	.1574	.1562	.1553	.1531	.1509	.1487	.1473	.1463	.1439
.0900	.1512	.1494	.1475	.1456	.1444	.1436	.1415	.1394	.1372	.1359	.1350	.1327
.1000	.1410	.1392	.1375	.1356	.1345	.1337	.1317	.1296	.1276	.1263	.1254	.1232

TABLE 108. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9076	.9067	.9058	.9049	.9040	.9030	.9020	.9009	.8998	.8987	.8975
.0002	.8726	.8714	.8702	.8690	.8677	.8664	.8650	.8636	.8621	.8606	.8590
.0003	.8469	.8455	.8441	.8427	.8412	.8396	.8380	.8363	.8346	.8328	.8309
.0004	.8261	.8245	.8229	.8213	.8196	.8179	.8161	.8142	.8122	.8103	.8082
.0005	.8082	.8065	.8048	.8030	.8012	.7993	.7973	.7953	.7932	.7910	.7888
.0006	.7925	.7907	.7889	.7870	.7850	.7830	.7809	.7787	.7765	.7742	.7717
.0007	.7785	.7765	.7746	.7726	.7705	.7684	.7662	.7639	.7615	.7591	.7565
.0008	.7657	.7637	.7616	.7595	.7573	.7551	.7528	.7504	.7479	.7453	.7426
.0009	.7539	.7518	.7497	.7475	.7452	.7429	.7405	.7380	.7354	.7327	.7299
.0010	.7430	.7408	.7386	.7363	.7340	.7316	.7291	.7265	.7238	.7211	.7182
.0020	.6620	.6594	.6567	.6539	.6510	.6480	.6450	.6418	.6385	.6352	.6317
.0030	.6077	.6047	.6017	.5987	.5955	.5922	.5889	.5854	.5818	.5782	.5743
.0040	.5664	.5632	.5601	.5568	.5535	.5500	.5465	.5428	.5390	.5352	.5311
.0050	.5330	.5298	.5265	.5231	.5196	.5161	.5124	.5086	.5047	.5007	.4965
.0060	.5051	.5018	.4984	.4949	.4914	.4877	.4840	.4801	.4761	.4720	.4677
.0070	.4811	.4777	.4743	.4708	.4671	.4634	.4596	.4557	.4516	.4475	.4432
.0080	.4601	.4567	.4533	.4497	.4460	.4423	.4384	.4344	.4303	.4262	.4218
.0090	.4415	.4381	.4346	.4310	.4273	.4235	.4197	.4156	.4115	.4074	.4030
.0100	.4249	.4214	.4179	.4143	.4106	.4068	.4029	.3989	.3947	.3906	.3862
.0200	.3171	.3137	.3102	.3067	.3030	.2993	.2955	.2916	.2876	.2836	.2794
.0300	.2583	.2551	.2518	.2484	.2450	.2415	.2379	.2342	.2305	.2267	.2228
.0400	.2199	.2168	.2137	.2105	.2073	.2040	.2006	.1972	.1937	.1902	.1865
.0500	.1923	.1894	.1865	.1835	.1804	.1773	.1742	.1709	.1676	.1644	.1609
.0600	.1714	.1686	.1659	.1630	.1601	.1572	.1542	.1512	.1481	.1450	.1418
.0700	.1549	.1523	.1496	.1469	.1442	.1414	.1386	.1357	.1328	.1299	.1268
.0800	.1415	.1390	.1365	.1339	.1313	.1287	.1260	.1232	.1205	.1177	.1148
.0900	.1304	.1280	.1256	.1231	.1206	.1181	.1156	.1130	.1103	.1077	.1050
.1000	.1210	.1187	.1164	.1140	.1116	.1092	.1068	.1043	.1018	.0993	.0967

TABLE 109. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9044	.9038	.9031	.9024	.9020	.9017	.9009	.9002	.8993	.8988	.8985	.8976
.0002	.8683	.8674	.8665	.8656	.8650	.8646	.8636	.8626	.8614	.8608	.8603	.8591
.0003	.8418	.8408	.8398	.8387	.8380	.8375	.8363	.8351	.8337	.8329	.8324	.8310
.0004	.8203	.8192	.8180	.8168	.8160	.8155	.8141	.8127	.8113	.8104	.8098	.8082
.0005	.8020	.8007	.7994	.7981	.7973	.7967	.7952	.7937	.7921	.7911	.7905	.7888
.0006	.7858	.7845	.7831	.7817	.7808	.7802	.7786	.7770	.7753	.7743	.7735	.7717
.0007	.7714	.7699	.7685	.7670	.7661	.7654	.7637	.7620	.7602	.7591	.7584	.7564
.0008	.7582	.7567	.7552	.7536	.7527	.7519	.7502	.7484	.7466	.7454	.7446	.7426
.0009	.7461	.7446	.7430	.7413	.7403	.7396	.7378	.7359	.7340	.7328	.7320	.7299
.0010	.7349	.7333	.7317	.7299	.7289	.7281	.7263	.7244	.7224	.7211	.7203	.7181
.0020	.6519	.6500	.6480	.6459	.6446	.6437	.6415	.6391	.6366	.6351	.6341	.6314
.0030	.5964	.5943	.5921	.5898	.5884	.5874	.5849	.5823	.5796	.5780	.5768	.5739
.0040	.5543	.5521	.5497	.5473	.5458	.5448	.5422	.5394	.5366	.5348	.5337	.5306
.0050	.5204	.5181	.5157	.5131	.5116	.5105	.5078	.5050	.5021	.5003	.4990	.4959
.0060	.4921	.4897	.4872	.4846	.4831	.4819	.4792	.4763	.4733	.4715	.4702	.4670
.0070	.4678	.4653	.4629	.4602	.4587	.4575	.4547	.4518	.4488	.4469	.4456	.4424
.0080	.4466	.4441	.4416	.4389	.4374	.4362	.4334	.4304	.4274	.4255	.4242	.4209
.0090	.4278	.4253	.4228	.4201	.4185	.4173	.4145	.4115	.4085	.4066	.4053	.4020
.0100	.4110	.4085	.4060	.4033	.4017	.4005	.3977	.3947	.3916	.3897	.3884	.3851
.0200	.3029	.3005	.2980	.2954	.2939	.2927	.2900	.2871	.2841	.2823	.2811	.2779
.0300	.2445	.2422	.2399	.2374	.2360	.2349	.2323	.2297	.2269	.2252	.2240	.2211
.0400	.2065	.2044	.2022	.2000	.1986	.1976	.1952	.1927	.1901	.1885	.1874	.1847
.0500	.1795	.1775	.1755	.1733	.1721	.1711	.1689	.1665	.1641	.1626	.1616	.1591
.0600	.1591	.1572	.1553	.1533	.1521	.1512	.1491	.1469	.1446	.1432	.1423	.1399
.0700	.1431	.1413	.1395	.1376	.1364	.1356	.1336	.1315	.1294	.1281	.1272	.1249
.0800	.1301	.1284	.1267	.1249	.1238	.1230	.1211	.1192	.1171	.1159	.1151	.1129
.0900	.1194	.1178	.1161	.1144	.1134	.1126	.1108	.1090	.1071	.1059	.1051	.1031
.1000	.1103	.1088	.1073	.1056	.1046	.1039	.1022	.1004	.0986	.0975	.0967	.0948

TABLE 109. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8967	.8957	.8947	.8937	.8926	.8916	.8904	.8893	.8880	.8868	.8855
.0002	.8579	.8566	.8552	.8539	.8525	.8510	.8495	.8479	.8463	.8446	.8429
.0003	.8295	.8280	.8264	.8248	.8232	.8215	.8197	.8178	.8159	.8140	.8119
.0004	.8066	.8049	.8031	.8013	.7995	.7976	.7956	.7935	.7914	.7892	.7869
.0005	.7870	.7851	.7833	.7813	.7793	.7772	.7751	.7729	.7706	.7682	.7657
.0006	.7698	.7679	.7659	.7638	.7616	.7594	.7571	.7547	.7523	.7498	.7471
.0007	.7545	.7524	.7503	.7481	.7458	.7435	.7411	.7386	.7360	.7333	.7305
.0008	.7405	.7383	.7361	.7338	.7315	.7290	.7265	.7239	.7212	.7184	.7155
.0009	.7277	.7255	.7232	.7208	.7183	.7158	.7132	.7105	.7077	.7048	.7018
.0010	.7159	.7135	.7111	.7087	.7061	.7035	.7008	.6980	.6951	.6922	.6891
.0020	.6287	.6259	.6230	.6200	.6170	.6138	.6106	.6072	.6037	.6002	.5965
.0030	.5710	.5679	.5647	.5615	.5581	.5547	.5512	.5475	.5437	.5399	.5359
.0040	.5275	.5242	.5209	.5175	.5140	.5104	.5067	.5029	.4990	.4950	.4907
.0050	.4927	.4893	.4859	.4824	.4788	.4751	.4713	.4674	.4633	.4592	.4549
.0060	.4637	.4603	.4569	.4533	.4496	.4458	.4420	.4380	.4339	.4297	.4254
.0070	.4391	.4356	.4321	.4285	.4248	.4210	.4171	.4130	.4089	.4047	.4003
.0080	.4176	.4141	.4106	.4069	.4032	.3994	.3955	.3914	.3873	.3831	.3787
.0090	.3987	.3951	.3916	.3880	.3842	.3804	.3765	.3724	.3683	.3641	.3597
.0100	.3818	.3783	.3747	.3711	.3673	.3635	.3596	.3556	.3514	.3473	.3429
.0200	.2747	.2713	.2680	.2645	.2610	.2574	.2538	.2500	.2461	.2422	.2382
.0300	.2181	.2150	.2119	.2087	.2055	.2022	.1988	.1954	.1918	.1883	.1846
.0400	.1820	.1791	.1762	.1733	.1703	.1672	.1641	.1610	.1578	.1545	.1512
.0500	.1565	.1538	.1512	.1484	.1456	.1428	.1400	.1371	.1341	.1311	.1281
.0600	.1375	.1350	.1325	.1299	.1273	.1247	.1221	.1194	.1166	.1139	.1110
.0700	.1227	.1203	.1180	.1156	.1132	.1107	.1083	.1057	.1032	.1006	.0980
.0800	.1108	.1086	.1064	.1041	.1019	.0996	.0972	.0949	.0925	.0901	.0876
.0900	.1011	.0990	.0969	.0948	.0926	.0904	.0882	.0860	.0838	.0815	.0792
.1000	.0929	.0909	.0889	.0869	.0849	.0828	.0808	.0786	.0765	.0744	.0722

TABLE 110. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8746	.8738	.8730	.8721	.8715	.8711	.8702	.8691	.8681	.8674	.8670	.8658
.0002	.8284	.8273	.8261	.8250	.8242	.8237	.8224	.8211	.8197	.8188	.8182	.8167
.0003	.7949	.7936	.7923	.7909	.7900	.7894	.7879	.7864	.7847	.7837	.7830	.7812
.0004	.7679	.7665	.7650	.7635	.7626	.7619	.7602	.7585	.7566	.7555	.7548	.7528
.0005	.7451	.7436	.7420	.7403	.7393	.7386	.7368	.7349	.7329	.7317	.7309	.7288
.0006	.7252	.7235	.7218	.7201	.7190	.7182	.7163	.7143	.7123	.7110	.7101	.7078
.0007	.7074	.7057	.7039	.7021	.7009	.7001	.6981	.6960	.6939	.6925	.6916	.6892
.0008	.6914	.6896	.6877	.6858	.6846	.6838	.6817	.6795	.6773	.6759	.6749	.6725
.0009	.6767	.6748	.6729	.6709	.6697	.6688	.6667	.6644	.6621	.6607	.6597	.6571
.0010	.6632	.6613	.6593	.6572	.6560	.6551	.6529	.6506	.6481	.6467	.6456	.6430
.0020	.5653	.5630	.5607	.5583	.5569	.5558	.5532	.5505	.5477	.5459	.5448	.5417
.0030	.5020	.4996	.4972	.4946	.4930	.4919	.4891	.4863	.4833	.4814	.4802	.4769
.0040	.4553	.4529	.4503	.4477	.4461	.4449	.4421	.4391	.4360	.4341	.4329	.4296
.0050	.4186	.4161	.4135	.4108	.4092	.4080	.4051	.4022	.3990	.3971	.3958	.3925
.0060	.3885	.3860	.3834	.3807	.3791	.3779	.3750	.3720	.3689	.3670	.3657	.3623
.0070	.3631	.3606	.3580	.3553	.3537	.3525	.3497	.3467	.3436	.3417	.3404	.3370
.0080	.3413	.3388	.3363	.3336	.3320	.3308	.3280	.3250	.3219	.3200	.3187	.3154
.0090	.3223	.3199	.3173	.3147	.3131	.3119	.3091	.3061	.3031	.3012	.2999	.2967
.0100	.3056	.3031	.3006	.2980	.2964	.2952	.2924	.2895	.2865	.2847	.2834	.2802
.0200	.2034	.2012	.1990	.1967	.1954	.1943	.1919	.1894	.1868	.1852	.1841	.1813
.0300	.1529	.1510	.1491	.1470	.1458	.1449	.1428	.1406	.1384	.1370	.1361	.1337
.0400	.1221	.1204	.1187	.1169	.1159	.1151	.1132	.1113	.1093	.1081	.1073	.1052
.0500	.1013	.0998	.0982	.0966	.0957	.0950	.0933	.0916	.0898	.0888	.0880	.0862
.0600	.0862	.0848	.0835	.0820	.0812	.0805	.0790	.0775	.0759	.0749	.0743	.0726
.0700	.0748	.0736	.0723	.0710	.0702	.0697	.0683	.0669	.0654	.0646	.0640	.0625
.0800	.0659	.0648	.0636	.0624	.0617	.0612	.0599	.0586	.0573	.0565	.0560	.0546
.0900	.0588	.0577	.0567	.0555	.0549	.0544	.0532	.0521	.0508	.0501	.0496	.0483
.1000	.0529	.0519	.0510	.0499	.0493	.0489	.0478	.0467	.0456	.0449	.0444	.0432

TABLE 110. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8647	.8634	.8621	.8608	.8595	.8581	.8566	.8551	.8536	.8520	.8503
.0002	.8151	.8135	.8118	.8101	.8083	.8064	.8045	.8026	.8005	.7984	.7962
.0003	.7794	.7775	.7756	.7736	.7715	.7693	.7671	.7648	.7625	.7600	.7575
.0004	.7508	.7487	.7465	.7443	.7420	.7396	.7372	.7347	.7320	.7294	.7265
.0005	.7266	.7243	.7220	.7196	.7171	.7146	.7120	.7092	.7064	.7035	.7005
.0006	.7056	.7031	.7007	.6982	.6955	.6928	.6901	.6872	.6842	.6812	.6779
.0007	.6868	.6843	.6817	.6791	.6764	.6735	.6706	.6676	.6645	.6613	.6580
.0008	.6700	.6673	.6647	.6619	.6591	.6561	.6531	.6500	.6468	.6435	.6400
.0009	.6546	.6518	.6491	.6462	.6433	.6403	.6372	.6339	.6306	.6272	.6236
.0010	.6404	.6376	.6348	.6318	.6288	.6257	.6225	.6192	.6158	.6123	.6086
.0020	.5386	.5354	.5321	.5287	.5252	.5217	.5180	.5142	.5103	.5063	.5021
.0030	.4737	.4703	.4668	.4632	.4595	.4558	.4519	.4479	.4438	.4396	.4352
.0040	.4262	.4227	.4192	.4155	.4118	.4079	.4040	.3999	.3957	.3915	.3871
.0050	.3891	.3856	.3820	.3783	.3746	.3707	.3668	.3627	.3585	.3543	.3499
.0060	.3590	.3554	.3519	.3482	.3444	.3406	.3367	.3326	.3285	.3243	.3199
.0070	.3337	.3302	.3267	.3230	.3193	.3155	.3116	.3076	.3035	.2994	.2950
.0080	.3121	.3086	.3051	.3016	.2979	.2941	.2903	.2863	.2823	.2782	.2740
.0090	.2934	.2900	.2865	.2830	.2793	.2756	.2719	.2680	.2640	.2600	.2558
.0100	.2770	.2736	.2702	.2667	.2631	.2594	.2557	.2519	.2480	.2441	.2400
.0200	.1786	.1757	.1728	.1698	.1668	.1637	.1607	.1575	.1542	.1510	.1476
.0300	.1313	.1288	.1263	.1238	.1212	.1187	.1160	.1134	.1106	.1079	.1051
.0400	.1031	.1009	.0988	.0966	.0944	.0921	.0899	.0876	.0852	.0829	.0805
.0500	.0843	.0824	.0805	.0786	.0766	.0747	.0727	.0707	.0686	.0666	.0645
.0600	.0710	.0692	.0675	.0658	.0641	.0623	.0606	.0588	.0570	.0552	.0534
.0700	.0610	.0594	.0579	.0563	.0547	.0532	.0516	.0500	.0484	.0468	.0452
.0800	.0532	.0518	.0504	.0490	.0476	.0461	.0447	.0433	.0418	.0404	.0389
.0900	.0471	.0458	.0445	.0432	.0419	.0406	.0393	.0380	.0366	.0353	.0340
.1000	.0421	.0409	.0397	.0385	.0373	.0361	.0349	.0337	.0325	.0313	.0301

TABLE 111. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8365	.8354	.8343	.8332	.8325	.8320	.8307	.8294	.8281	.8273	.8267	.8252
.0002	.7780	.7766	.7752	.7737	.7728	.7721	.7705	.7688	.7671	.7660	.7653	.7634
.0003	.7363	.7347	.7331	.7314	.7304	.7296	.7277	.7258	.7238	.7225	.7217	.7195
.0004	.7032	.7015	.6997	.6978	.6967	.6958	.6938	.6917	.6895	.6881	.6872	.6848
.0005	.6755	.6736	.6717	.6697	.6685	.6676	.6654	.6632	.6608	.6594	.6584	.6558
.0006	.6515	.6495	.6475	.6454	.6441	.6432	.6409	.6386	.6361	.6345	.6335	.6308
.0007	.6303	.6283	.6262	.6240	.6227	.6217	.6193	.6168	.6143	.6127	.6116	.6088
.0008	.6113	.6092	.6071	.6048	.6034	.6024	.6000	.5974	.5948	.5931	.5920	.5891
.0009	.5941	.5919	.5897	.5874	.5860	.5849	.5824	.5798	.5771	.5754	.5742	.5713
.0010	.5783	.5761	.5738	.5714	.5700	.5689	.5664	.5637	.5609	.5592	.5580	.5550
.0020	.4674	.4649	.4624	.4597	.4581	.4570	.4541	.4512	.4481	.4462	.4449	.4416
.0030	.3990	.3964	.3939	.3911	.3895	.3883	.3854	.3824	.3792	.3773	.3760	.3726
.0040	.3503	.3478	.3452	.3425	.3408	.3396	.3368	.3338	.3307	.3287	.3274	.3241
.0050	.3131	.3106	.3081	.3054	.3038	.3026	.2998	.2968	.2938	.2919	.2906	.2874
.0060	.2834	.2810	.2785	.2759	.2743	.2732	.2704	.2675	.2645	.2627	.2615	.2583
.0070	.2591	.2567	.2542	.2517	.2502	.2490	.2463	.2435	.2406	.2388	.2376	.2346
.0080	.2385	.2362	.2338	.2314	.2299	.2288	.2262	.2234	.2206	.2189	.2177	.2147
.0090	.2210	.2187	.2164	.2140	.2126	.2115	.2090	.2063	.2036	.2019	.2008	.1979
.0100	.2058	.2036	.2014	.1990	.1976	.1966	.1941	.1915	.1889	.1873	.1862	.1833
.0200	.1196	.1179	.1162	.1144	.1134	.1126	.1107	.1088	.1068	.1056	.1047	.1026
.0300	.0817	.0804	.0790	.0776	.0768	.0761	.0747	.0731	.0716	.0706	.0700	.0684
.0400	.0606	.0595	.0583	.0572	.0565	.0560	.0548	.0535	.0523	.0515	.0510	.0497
.0500	.0472	.0463	.0453	.0443	.0438	.0433	.0423	.0413	.0402	.0396	.0392	.0381
.0600	.0381	.0373	.0365	.0356	.0351	.0348	.0339	.0330	.0321	.0316	.0312	.0303
.0700	.0315	.0308	.0301	.0294	.0290	.0287	.0279	.0271	.0264	.0259	.0256	.0248
.0800	.0266	.0260	.0254	.0248	.0244	.0241	.0235	.0228	.0221	.0217	.0214	.0207
.0900	.0229	.0223	.0218	.0212	.0209	.0206	.0200	.0194	.0188	.0185	.0182	.0176
.1000	.0199	.0194	.0189	.0184	.0181	.0179	.0173	.0168	.0163	.0159	.0157	.0152

TABLE 111. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Extended Scatchard*—Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8237	.8222	.8206	.8189	.8172	.8154	.8136	.8117	.8097	.8077	.8056
.0002	.7614	.7594	.7573	.7552	.7529	.7506	.7483	.7458	.7433	.7407	.7380
.0003	.7173	.7150	.7126	.7101	.7076	.7049	.7023	.6994	.6965	.6936	.6905
.0004	.6824	.6798	.6772	.6745	.6718	.6689	.6660	.6629	.6597	.6565	.6531
.0005	.6532	.6505	.6477	.6449	.6419	.6389	.6358	.6325	.6292	.6257	.6221
.0006	.6281	.6253	.6223	.6193	.6163	.6131	.6098	.6064	.6029	.5993	.5956
.0007	.6060	.6030	.6000	.5969	.5937	.5904	.5870	.5835	.5799	.5762	.5723
.0008	.5862	.5832	.5801	.5769	.5735	.5702	.5667	.5630	.5593	.5555	.5515
.0009	.5683	.5652	.5620	.5587	.5553	.5519	.5483	.5446	.5408	.5369	.5328
.0010	.5520	.5488	.5455	.5422	.5387	.5352	.5316	.5278	.5239	.5199	.5158
.0020	.4383	.4347	.4312	.4275	.4238	.4199	.4160	.4119	.4077	.4035	.3990
.0030	.3693	.3657	.3621	.3584	.3546	.3507	.3468	.3427	.3385	.3343	.3298
.0040	.3208	.3172	.3137	.3101	.3063	.3025	.2986	.2946	.2906	.2864	.2821
.0050	.2841	.2807	.2772	.2736	.2700	.2663	.2626	.2587	.2547	.2507	.2465
.0060	.2551	.2518	.2484	.2450	.2414	.2379	.2342	.2305	.2266	.2228	.2188
.0070	.2315	.2282	.2250	.2216	.2182	.2148	.2113	.2076	.2040	.2003	.1964
.0080	.2117	.2086	.2054	.2022	.1989	.1956	.1922	.1887	.1852	.1816	.1779
.0090	.1950	.1919	.1889	.1858	.1826	.1794	.1761	.1728	.1694	.1659	.1624
.0100	.1805	.1776	.1746	.1716	.1686	.1655	.1623	.1591	.1558	.1525	.1491
.0200	.1006	.0984	.0962	.0940	.0918	.0896	.0873	.0850	.0827	.0804	.0780
.0300	.0667	.0651	.0634	.0617	.0600	.0583	.0566	.0549	.0531	.0514	.0496
.0400	.0483	.0470	.0457	.0443	.0430	.0416	.0403	.0389	.0375	.0362	.0348
.0500	.0370	.0359	.0348	.0337	.0325	.0314	.0303	.0292	.0281	.0270	.0259
.0600	.0294	.0284	.0275	.0266	.0256	.0247	.0238	.0229	.0219	.0210	.0201
.0700	.0240	.0232	.0224	.0216	.0208	.0200	.0192	.0184	.0176	.0169	.0161
.0800	.0200	.0193	.0186	.0179	.0172	.0166	.0159	.0152	.0145	.0139	.0132
.0900	.0170	.0164	.0158	.0152	.0145	.0140	.0134	.0128	.0122	.0116	.0110
.1000	.0146	.0141	.0135	.0130	.0125	.0119	.0114	.0109	.0104	.0099	.0093

TABLE 112. *Bjerrum's minimum ion-parameter* for uni-univalent electrolytes in aqueous solutions from 0 to 100 °C*

Temperature	Ion-parameter	Temperature	Ion-parameter
t	a_B	t	a_B
°C	10^8 cm	°C	10^8 cm
(On weight or volume basis)			
0	3.49	50	3.70
5	3.50	55	3.73
10	3.52	60	3.75
15	3.54	65	3.78
18	3.55	70	3.81
20	3.56	75	3.84
25	3.58	80	3.88
30	3.60	85	3.91
35	3.62	90	3.94
38	3.64	95	3.98
40	3.65	100	4.02
45	3.67		

*Sometimes called the ion size.

TABLE 113. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9881	.9881	.9880
.0002	.9844	.9843	.9841	.9840	.9839	.9839	.9837	.9836	.9834	.9834	.9833	.9831
.0003	.9809	.9808	.9807	.9805	.9804	.9804	.9802	.9800	.9798	.9797	.9797	.9794
.0004	.9781	.9779	.9778	.9776	.9775	.9774	.9772	.9770	.9768	.9767	.9766	.9764
.0005	.9756	.9754	.9753	.9751	.9750	.9749	.9747	.9744	.9742	.9741	.9740	.9737
.0006	.9734	.9732	.9730	.9728	.9727	.9726	.9723	.9721	.9718	.9717	.9716	.9713
.0007	.9713	.9711	.9709	.9707	.9706	.9705	.9702	.9700	.9697	.9695	.9694	.9691
.0008	.9694	.9692	.9690	.9688	.9686	.9685	.9683	.9680	.9677	.9675	.9674	.9671
.0009	.9677	.9675	.9672	.9670	.9668	.9667	.9664	.9662	.9658	.9657	.9655	.9652
.0010	.9660	.9658	.9655	.9653	.9651	.9650	.9647	.9644	.9641	.9639	.9638	.9634
.0020	.9529	.9526	.9523	.9520	.9517	.9516	.9512	.9508	.9503	.9501	.9499	.9494
.0030	.9433	.9429	.9425	.9421	.9418	.9417	.9412	.9407	.9402	.9399	.9397	.9391
.0040	.9354	.9349	.9345	.9340	.9337	.9335	.9330	.9325	.9319	.9315	.9313	.9306
.0050	.9286	.9281	.9276	.9271	.9268	.9266	.9260	.9254	.9248	.9244	.9241	.9234
.0060	.9225	.9220	.9215	.9210	.9206	.9204	.9198	.9191	.9185	.9181	.9178	.9170
.0070	.9171	.9166	.9160	.9155	.9151	.9148	.9142	.9135	.9128	.9124	.9121	.9113
.0080	.9121	.9116	.9110	.9104	.9100	.9098	.9091	.9084	.9076	.9072	.9068	.9060
.0090	.9076	.9070	.9064	.9058	.9054	.9051	.9044	.9036	.9028	.9024	.9020	.9011
.0100	.9033	.9027	.9021	.9014	.9010	.9007	.9000	.8992	.8984	.8979	.8976	.8966
.0200	.8711	.8703	.8695	.8687	.8682	.8678	.8669	.8660	.8649	.8643	.8639	.8628
.0300	.8488	.8479	.8471	.8462	.8456	.8452	.8441	.8430	.8419	.8412	.8408	.8395
.0400	.8314	.8305	.8296	.8286	.8279	.8275	.8264	.8252	.8240	.8233	.8228	.8214
.0500	.8171	.8161	.8151	.8141	.8134	.8130	.8118	.8106	.8093	.8086	.8080	.8066
.0600	.8049	.8038	.8028	.8018	.8011	.8006	.7994	.7981	.7967	.7960	.7954	.7939
.0700	.7942	.7931	.7921	.7910	.7902	.7898	.7885	.7872	.7858	.7850	.7845	.7829
.0800	.7847	.7835	.7825	.7814	.7806	.7801	.7789	.7775	.7761	.7753	.7748	.7731
.0900	.7761	.7749	.7739	.7728	.7720	.7715	.7702	.7688	.7674	.7666	.7660	.7644
.1000	.7683	.7671	.7660	.7649	.7641	.7636	.7623	.7609	.7594	.7587	.7581	.7564

TABLE 113. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9877	.9876	.9874	.9873	.9871	.9870	.9868	.9866	.9865	.9863
.0002	.9829	.9828	.9826	.9824	.9822	.9820	.9817	.9815	.9813	.9810	.9808
.0003	.9792	.9790	.9788	.9785	.9783	.9780	.9778	.9775	.9772	.9769	.9766
.0004	.9761	.9759	.9756	.9753	.9751	.9748	.9745	.9741	.9738	.9735	.9731
.0005	.9734	.9732	.9729	.9726	.9722	.9719	.9716	.9712	.9708	.9705	.9701
.0006	.9710	.9707	.9704	.9701	.9697	.9694	.9690	.9686	.9682	.9678	.9674
.0007	.9688	.9685	.9681	.9678	.9674	.9670	.9666	.9662	.9658	.9653	.9649
.0008	.9668	.9664	.9660	.9657	.9653	.9649	.9644	.9640	.9635	.9631	.9626
.0009	.9648	.9645	.9641	.9637	.9633	.9629	.9624	.9619	.9615	.9610	.9605
.0010	.9630	.9627	.9623	.9618	.9614	.9610	.9605	.9600	.9595	.9590	.9584
.0020	.9489	.9484	.9479	.9473	.9467	.9461	.9455	.9448	.9441	.9435	.9427
.0030	.9385	.9379	.9372	.9366	.9359	.9352	.9345	.9337	.9329	.9321	.9312
.0040	.9300	.9293	.9286	.9278	.9271	.9263	.9255	.9246	.9237	.9228	.9218
.0050	.9227	.9219	.9212	.9203	.9195	.9186	.9178	.9168	.9158	.9148	.9138
.0060	.9163	.9154	.9146	.9137	.9128	.9119	.9110	.9099	.9089	.9078	.9067
.0070	.9105	.9096	.9087	.9078	.9069	.9059	.9049	.9038	.9027	.9016	.9004
.0080	.9052	.9043	.9033	.9024	.9014	.9003	.8993	.8982	.8970	.8958	.8946
.0090	.9003	.8993	.8984	.8974	.8963	.8952	.8942	.8930	.8918	.8906	.8893
.0100	.8957	.8948	.8938	.8927	.8917	.8905	.8894	.8882	.8869	.8857	.8843
.0200	.8616	.8604	.8592	.8579	.8566	.8552	.8538	.8523	.8507	.8492	.8475
.0300	.8382	.8369	.8354	.8340	.8326	.8310	.8295	.8278	.8261	.8244	.8226
.0400	.8201	.8186	.8171	.8156	.8140	.8124	.8107	.8089	.8071	.8053	.8034
.0500	.8052	.8037	.8021	.8005	.7988	.7971	.7954	.7935	.7916	.7897	.7877
.0600	.7925	.7909	.7893	.7876	.7859	.7841	.7824	.7804	.7785	.7766	.7745
.0700	.7814	.7799	.7781	.7764	.7747	.7729	.7711	.7691	.7671	.7651	.7630
.0800	.7717	.7700	.7683	.7666	.7648	.7629	.7611	.7591	.7570	.7550	.7529
.0900	.7629	.7612	.7594	.7577	.7559	.7540	.7522	.7501	.7480	.7460	.7438
.1000	.7549	.7532	.7514	.7496	.7478	.7459	.7441	.7419	.7398	.7378	.7356

TABLE 114. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9781	.9779	.9778	.9776	.9775	.9774	.9772	.9770	.9768	.9767	.9766	.9764
.0002	.9694	.9692	.9690	.9688	.9686	.9685	.9683	.9680	.9677	.9675	.9674	.9671
.0003	.9630	.9627	.9624	.9622	.9620	.9619	.9616	.9612	.9609	.9607	.9605	.9601
.0004	.9576	.9573	.9570	.9567	.9565	.9564	.9560	.9556	.9552	.9550	.9548	.9544
.0005	.9529	.9526	.9523	.9520	.9517	.9516	.9512	.9508	.9503	.9501	.9499	.9494
.0006	.9488	.9485	.9481	.9477	.9475	.9473	.9469	.9465	.9460	.9457	.9455	.9450
.0007	.9450	.9447	.9443	.9439	.9436	.9435	.9430	.9425	.9420	.9417	.9415	.9410
.0008	.9416	.9412	.9408	.9404	.9401	.9399	.9394	.9389	.9384	.9381	.9379	.9373
.0009	.9384	.9380	.9375	.9371	.9368	.9366	.9361	.9356	.9350	.9347	.9345	.9338
.0010	.9354	.9349	.9345	.9340	.9337	.9335	.9330	.9325	.9319	.9315	.9313	.9306
.0020	.9121	.9116	.9110	.9104	.9100	.9098	.9091	.9084	.9076	.9072	.9068	.9060
.0030	.8955	.8949	.8942	.8935	.8931	.8928	.8920	.8912	.8903	.8898	.8894	.8884
.0040	.8823	.8815	.8808	.8801	.8796	.8792	.8784	.8775	.8765	.8760	.8756	.8745
.0050	.8711	.8703	.8695	.8687	.8682	.8678	.8669	.8660	.8649	.8643	.8639	.8628
.0060	.8614	.8606	.8598	.8589	.8583	.8580	.8570	.8560	.8549	.8543	.8538	.8526
.0070	.8528	.8519	.8511	.8502	.8496	.8492	.8482	.8471	.8460	.8453	.8449	.8436
.0080	.8450	.8441	.8432	.8423	.8417	.8413	.8403	.8392	.8380	.8373	.8368	.8355
.0090	.8379	.8370	.8361	.8352	.8345	.8341	.8330	.8319	.8307	.8300	.8295	.8282
.0100	.8314	.8305	.8296	.8286	.8279	.8275	.8264	.8252	.8240	.8233	.8228	.8214
.0200	.7847	.7835	.7825	.7814	.7806	.7801	.7789	.7775	.7761	.7753	.7748	.7731
.0300	.7545	.7533	.7522	.7511	.7503	.7498	.7484	.7470	.7455	.7447	.7441	.7424
.0400	.7323	.7310	.7299	.7287	.7279	.7273	.7260	.7245	.7229	.7221	.7215	.7197
.0500	.7146	.7133	.7122	.7110	.7101	.7096	.7082	.7067	.7051	.7043	.7037	.7019
.0600	.7000	.6987	.6976	.6964	.6955	.6950	.6936	.6921	.6905	.6897	.6891	.6872
.0700	.6876	.6863	.6852	.6840	.6831	.6826	.6812	.6797	.6780	.6773	.6767	.6748
.0800	.6769	.6755	.6744	.6732	.6723	.6718	.6704	.6689	.6673	.6665	.6659	.6641
.0900	.6674	.6660	.6649	.6637	.6629	.6624	.6610	.6595	.6578	.6571	.6565	.6546
.1000	.6590	.6576	.6565	.6553	.6544	.6539	.6526	.6510	.6494	.6487	.6481	.6462

TABLE 114. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9761	.9759	.9756	.9753	.9751	.9748	.9745	.9741	.9738	.9735	.9731
.0002	.9668	.9664	.9660	.9657	.9653	.9649	.9644	.9640	.9635	.9631	.9626
.0003	.9597	.9593	.9589	.9584	.9580	.9575	.9570	.9564	.9559	.9553	.9548
.0004	.9539	.9535	.9530	.9525	.9519	.9514	.9508	.9502	.9496	.9490	.9483
.0005	.9489	.9484	.9479	.9473	.9467	.9461	.9455	.9448	.9441	.9435	.9427
.0006	.9444	.9439	.9433	.9427	.9421	.9414	.9408	.9400	.9393	.9386	.9378
.0007	.9404	.9398	.9392	.9385	.9379	.9372	.9365	.9357	.9349	.9341	.9333
.0008	.9367	.9360	.9354	.9347	.9340	.9333	.9325	.9317	.9309	.9301	.9292
.0009	.9332	.9326	.9319	.9312	.9304	.9297	.9289	.9280	.9272	.9263	.9254
.0010	.9300	.9293	.9286	.9278	.9271	.9263	.9255	.9246	.9237	.9228	.9218
.0020	.9052	.9043	.9033	.9024	.9014	.9003	.8993	.8982	.8970	.8958	.8946
.0030	.8875	.8865	.8854	.8843	.8831	.8819	.8808	.8795	.8781	.8768	.8754
.0040	.8734	.8723	.8711	.8699	.8687	.8674	.8661	.8646	.8632	.8618	.8602
.0050	.8616	.8604	.8592	.8579	.8566	.8552	.8538	.8523	.8507	.8492	.8475
.0060	.8514	.8502	.8488	.8475	.8461	.8446	.8432	.8416	.8399	.8383	.8366
.0070	.8424	.8411	.8397	.8383	.8368	.8353	.8338	.8321	.8304	.8288	.8270
.0080	.8343	.8329	.8314	.8300	.8285	.8269	.8254	.8237	.8219	.8202	.8184
.0090	.8269	.8255	.8240	.8225	.8209	.8193	.8177	.8160	.8142	.8124	.8105
.0100	.8201	.8186	.8171	.8156	.8140	.8124	.8107	.8089	.8071	.8053	.8034
.0200	.7717	.7700	.7683	.7666	.7648	.7629	.7611	.7591	.7570	.7550	.7529
.0300	.7408	.7391	.7373	.7355	.7336	.7316	.7298	.7277	.7255	.7234	.7212
.0400	.7182	.7165	.7145	.7127	.7108	.7088	.7070	.7048	.7025	.7005	.6982
.0500	.7003	.6986	.6966	.6948	.6929	.6909	.6890	.6868	.6846	.6825	.6803
.0600	.6857	.6839	.6820	.6801	.6782	.6762	.6744	.6721	.6699	.6678	.6656
.0700	.6733	.6715	.6695	.6677	.6658	.6638	.6620	.6597	.6575	.6555	.6533
.0800	.6625	.6608	.6588	.6570	.6551	.6531	.6513	.6491	.6468	.6448	.6427
.0900	.6531	.6514	.6494	.6476	.6457	.6437	.6420	.6397	.6375	.6355	.6334
.1000	.6447	.6430	.6410	.6392	.6373	.6353	.6337	.6314	.6292	.6273	.6251

TABLE 115. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9677	.9675	.9672	.9670	.9668	.9667	.9664	.9662	.9658	.9657	.9655	.9652
.0002	.9552	.9549	.9546	.9543	.9540	.9539	.9535	.9531	.9527	.9525	.9523	.9518
.0003	.9459	.9456	.9452	.9448	.9446	.9444	.9440	.9435	.9430	.9427	.9425	.9419
.0004	.9384	.9380	.9375	.9371	.9368	.9366	.9361	.9356	.9350	.9347	.9345	.9338
.0005	.9318	.9314	.9309	.9305	.9301	.9299	.9294	.9288	.9282	.9278	.9276	.9269
.0006	.9261	.9256	.9251	.9246	.9242	.9240	.9234	.9228	.9221	.9218	.9215	.9208
.0007	.9208	.9203	.9198	.9193	.9189	.9187	.9181	.9174	.9167	.9163	.9160	.9152
.0008	.9161	.9155	.9150	.9144	.9140	.9138	.9131	.9125	.9117	.9113	.9110	.9102
.0009	.9117	.9111	.9105	.9099	.9095	.9093	.9086	.9079	.9071	.9067	.9063	.9055
.0010	.9076	.9070	.9064	.9058	.9054	.9051	.9044	.9036	.9028	.9024	.9020	.9011
.0020	.8765	.8757	.8750	.8742	.8737	.8733	.8724	.8715	.8705	.8699	.8695	.8684
.0030	.8548	.8540	.8532	.8523	.8517	.8513	.8503	.8493	.8481	.8475	.8470	.8458
.0040	.8379	.8370	.8361	.8352	.8345	.8341	.8330	.8319	.8307	.8300	.8295	.8282
.0050	.8240	.8230	.8220	.8210	.8204	.8199	.8188	.8176	.8163	.8156	.8151	.8136
.0060	.8120	.8110	.8100	.8090	.8083	.8078	.8066	.8054	.8040	.8033	.8028	.8013
.0070	.8015	.8004	.7994	.7984	.7977	.7972	.7960	.7947	.7933	.7926	.7920	.7905
.0080	.7922	.7911	.7901	.7890	.7882	.7877	.7865	.7852	.7838	.7830	.7824	.7809
.0090	.7838	.7826	.7816	.7805	.7797	.7792	.7780	.7766	.7752	.7744	.7738	.7722
.0100	.7761	.7749	.7739	.7728	.7720	.7715	.7702	.7688	.7674	.7666	.7660	.7644
.0200	.7230	.7217	.7206	.7194	.7185	.7180	.7166	.7152	.7136	.7128	.7122	.7104
.0300	.6906	.6892	.6881	.6869	.6860	.6855	.6841	.6826	.6810	.6802	.6796	.6778
.0400	.6674	.6660	.6649	.6637	.6629	.6624	.6610	.6595	.6578	.6571	.6565	.6546
.0500	.6496	.6482	.6471	.6459	.6451	.6446	.6432	.6417	.6401	.6394	.6388	.6369
.0600	.6351	.6337	.6327	.6315	.6307	.6302	.6288	.6273	.6257	.6251	.6245	.6226
.0700	.6231	.6217	.6206	.6195	.6187	.6182	.6169	.6154	.6138	.6132	.6126	.6107
.0800	.6128	.6114	.6104	.6093	.6084	.6080	.6067	.6052	.6036	.6030	.6024	.6006
.0900	.6039	.6025	.6015	.6004	.5996	.5991	.5978	.5964	.5948	.5942	.5937	.5919
.1000	.5960	.5946	.5936	.5925	.5917	.5913	.5900	.5886	.5870	.5865	.5859	.5841

TABLE 115. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_-=3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9648	.9645	.9641	.9637	.9633	.9629	.9624	.9619	.9615	.9610	.9605
.0002	.9513	.9508	.9503	.9498	.9492	.9487	.9481	.9474	.9468	.9461	.9454
.0003	.9414	.9408	.9402	.9395	.9389	.9382	.9375	.9367	.9360	.9352	.9344
.0004	.9332	.9326	.9319	.9312	.9304	.9297	.9289	.9280	.9272	.9263	.9254
.0005	.9262	.9255	.9247	.9240	.9232	.9223	.9215	.9206	.9196	.9187	.9177
.0006	.9200	.9193	.9184	.9176	.9168	.9159	.9149	.9140	.9130	.9119	.9109
.0007	.9145	.9136	.9128	.9119	.9110	.9100	.9091	.9080	.9070	.9059	.9047
.0008	.9094	.9085	.9076	.9067	.9057	.9047	.9037	.9026	.9015	.9004	.8992
.0009	.9047	.9038	.9028	.9018	.9009	.8998	.8988	.8976	.8965	.8953	.8940
.0010	.9003	.8993	.8984	.8974	.8963	.8952	.8942	.8930	.8918	.8906	.8893
.0020	.8673	.8661	.8649	.8637	.8624	.8610	.8597	.8582	.8567	.8552	.8536
.0030	.8445	.8432	.8419	.8405	.8390	.8375	.8360	.8344	.8327	.8311	.8293
.0040	.8269	.8255	.8240	.8225	.8209	.8193	.8177	.8160	.8142	.8124	.8105
.0050	.8123	.8108	.8092	.8077	.8061	.8044	.8027	.8009	.7990	.7972	.7952
.0060	.7999	.7983	.7967	.7951	.7934	.7917	.7900	.7881	.7861	.7842	.7822
.0070	.7890	.7875	.7858	.7841	.7824	.7806	.7789	.7769	.7749	.7730	.7709
.0080	.7794	.7778	.7761	.7744	.7726	.7708	.7690	.7670	.7650	.7630	.7609
.0090	.7707	.7691	.7673	.7656	.7638	.7620	.7602	.7581	.7561	.7541	.7519
.0100	.7629	.7612	.7594	.7577	.7559	.7540	.7522	.7501	.7480	.7460	.7438
.0200	.7088	.7071	.7051	.7033	.7014	.6993	.6975	.6953	.6931	.6910	.6888
.0300	.6762	.6745	.6725	.6706	.6687	.6667	.6649	.6627	.6604	.6584	.6562
.0400	.6531	.6514	.6494	.6476	.6457	.6437	.6420	.6397	.6375	.6355	.6334
.0500	.6354	.6337	.6317	.6299	.6281	.6261	.6244	.6222	.6200	.6181	.6160
.0600	.6212	.6195	.6175	.6158	.6140	.6120	.6104	.6082	.6061	.6042	.6021
.0700	.6093	.6077	.6057	.6040	.6022	.6003	.5988	.5966	.5945	.5927	.5907
.0800	.5993	.5977	.5957	.5940	.5923	.5904	.5889	.5868	.5847	.5829	.5809
.0900	.5905	.5890	.5870	.5854	.5836	.5818	.5803	.5782	.5762	.5744	.5725
.1000	.5828	.5813	.5794	.5778	.5761	.5742	.5728	.5708	.5687	.5670	.5652

TABLE 116. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9576	.9573	.9570	.9567	.9565	.9564	.9560	.9556	.9552	.9550	.9548	.9544
.0002	.9416	.9412	.9408	.9404	.9401	.9399	.9394	.9389	.9384	.9381	.9379	.9373
.0003	.9298	.9294	.9289	.9284	.9281	.9279	.9273	.9267	.9261	.9257	.9255	.9248
.0004	.9203	.9198	.9193	.9187	.9184	.9181	.9175	.9168	.9161	.9157	.9154	.9146
.0005	.9121	.9116	.9110	.9104	.9100	.9098	.9091	.9084	.9076	.9072	.9068	.9060
.0006	.9050	.9044	.9038	.9031	.9027	.9024	.9017	.9009	.9001	.8997	.8993	.8984
.0007	.8985	.8979	.8973	.8966	.8961	.8958	.8951	.8943	.8934	.8929	.8926	.8916
.0008	.8927	.8920	.8913	.8906	.8902	.8898	.8891	.8882	.8873	.8868	.8864	.8854
.0009	.8873	.8866	.8859	.8852	.8847	.8843	.8835	.8826	.8817	.8812	.8808	.8797
.0010	.8823	.8815	.8808	.8801	.8796	.8792	.8784	.8775	.8765	.8760	.8756	.8745
.0020	.8450	.8441	.8432	.8423	.8417	.8413	.8403	.8392	.8380	.8373	.8368	.8355
.0030	.8198	.8188	.8178	.8168	.8161	.8157	.8145	.8133	.8120	.8113	.8108	.8093
.0040	.8004	.7994	.7983	.7973	.7966	.7961	.7949	.7936	.7922	.7914	.7909	.7893
.0050	.7847	.7835	.7825	.7814	.7806	.7801	.7789	.7775	.7761	.7753	.7748	.7731
.0060	.7713	.7702	.7691	.7680	.7672	.7667	.7654	.7640	.7625	.7617	.7612	.7595
.0070	.7598	.7586	.7575	.7564	.7556	.7550	.7537	.7523	.7508	.7500	.7494	.7477
.0080	.7496	.7484	.7473	.7461	.7453	.7448	.7434	.7420	.7405	.7397	.7391	.7373
.0090	.7405	.7392	.7381	.7370	.7361	.7356	.7343	.7328	.7312	.7305	.7298	.7281
.0100	.7323	.7310	.7299	.7287	.7279	.7273	.7260	.7245	.7229	.7221	.7215	.7197
.0200	.6769	.6755	.6744	.6732	.6723	.6718	.6704	.6689	.6673	.6665	.6659	.6641
.0300	.6444	.6430	.6420	.6408	.6399	.6394	.6381	.6366	.6350	.6343	.6337	.6318
.0400	.6219	.6205	.6194	.6183	.6175	.6170	.6157	.6142	.6126	.6119	.6114	.6095
.0500	.6048	.6034	.6024	.6013	.6005	.6000	.5987	.5973	.5957	.5951	.5946	.5928
.0600	.5912	.5898	.5888	.5878	.5870	.5865	.5853	.5839	.5823	.5818	.5812	.5795
.0700	.5800	.5786	.5777	.5767	.5759	.5754	.5742	.5728	.5713	.5708	.5703	.5685
.0800	.5705	.5691	.5682	.5673	.5665	.5661	.5649	.5635	.5620	.5615	.5610	.5593
.0900	.5623	.5610	.5601	.5592	.5584	.5580	.5568	.5555	.5540	.5536	.5531	.5514
.1000	.5552	.5538	.5530	.5521	.5513	.5509	.5498	.5485	.5470	.5466	.5461	.5445

TABLE 116. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*—Continued

(Electrolyte, $z_+z_-=4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9539	.9535	.9530	.9525	.9519	.9514	.9508	.9502	.9496	.9490	.9483
.0002	.9367	.9360	.9354	.9347	.9340	.9333	.9325	.9317	.9309	.9301	.9292
.0003	.9241	.9233	.9226	.9218	.9209	.9201	.9192	.9183	.9173	.9163	.9153
.0004	.9139	.9130	.9122	.9113	.9104	.9094	.9084	.9074	.9063	.9053	.9041
.0005	.9052	.9043	.9033	.9024	.9014	.9003	.8993	.8982	.8970	.8958	.8946
.0006	.8975	.8966	.8956	.8945	.8935	.8924	.8913	.8901	.8888	.8876	.8863
.0007	.8907	.8897	.8886	.8875	.8864	.8853	.8841	.8828	.8815	.8802	.8788
.0008	.8844	.8834	.8823	.8812	.8800	.8788	.8776	.8762	.8749	.8735	.8721
.0009	.8787	.8776	.8765	.8753	.8741	.8729	.8716	.8702	.8688	.8674	.8659
.0010	.8734	.8723	.8711	.8699	.8687	.8674	.8661	.8646	.8632	.8618	.8602
.0020	.8343	.8329	.8314	.8300	.8285	.8269	.8254	.8237	.8219	.8202	.8184
.0030	.8079	.8065	.8049	.8033	.8017	.7999	.7983	.7964	.7945	.7926	.7906
.0040	.7879	.7863	.7846	.7830	.7813	.7794	.7777	.7757	.7737	.7718	.7697
.0050	.7717	.7700	.7683	.7666	.7648	.7629	.7611	.7591	.7570	.7550	.7529
.0060	.7580	.7563	.7545	.7527	.7509	.7490	.7472	.7451	.7430	.7410	.7388
.0070	.7462	.7445	.7426	.7408	.7390	.7370	.7352	.7331	.7309	.7289	.7267
.0080	.7358	.7341	.7322	.7304	.7285	.7265	.7247	.7226	.7204	.7183	.7161
.0090	.7265	.7248	.7229	.7211	.7192	.7172	.7154	.7132	.7110	.7089	.7067
.0100	.7182	.7165	.7145	.7127	.7108	.7088	.7070	.7048	.7025	.7005	.6982
.0200	.6625	.6608	.6588	.6570	.6551	.6531	.6513	.6491	.6468	.6448	.6427
.0300	.6304	.6287	.6267	.6249	.6231	.6211	.6194	.6172	.6151	.6131	.6111
.0400	.6081	.6065	.6046	.6028	.6011	.5991	.5976	.5954	.5933	.5915	.5895
.0500	.5914	.5899	.5879	.5863	.5845	.5827	.5812	.5791	.5771	.5753	.5734
.0600	.5782	.5767	.5748	.5732	.5715	.5697	.5683	.5662	.5642	.5626	.5607
.0700	.5673	.5659	.5640	.5624	.5608	.5590	.5577	.5557	.5537	.5521	.5504
.0800	.5581	.5567	.5549	.5534	.5518	.5500	.5488	.5468	.5449	.5434	.5417
.0900	.5502	.5489	.5470	.5456	.5440	.5423	.5412	.5392	.5373	.5359	.5342
.1000	.5434	.5420	.5402	.5388	.5373	.5356	.5345	.5326	.5308	.5293	.5277

TABLE 117. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*

(Electrolyte, $z_+z_-=6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9384	.9380	.9375	.9371	.9368	.9366	.9361	.9356	.9350	.9347	.9345	.9338
.0002	.9161	.9155	.9150	.9144	.9140	.9138	.9131	.9125	.9117	.9113	.9110	.9102
.0003	.9001	.8995	.8988	.8982	.8977	.8974	.8967	.8959	.8950	.8945	.8942	.8932
.0004	.8873	.8866	.8859	.8852	.8847	.8843	.8835	.8826	.8817	.8812	.8808	.8797
.0005	.8765	.8757	.8750	.8742	.8737	.8733	.8724	.8715	.8705	.8699	.8695	.8684
.0006	.8671	.8663	.8655	.8647	.8641	.8637	.8628	.8618	.8607	.8601	.8597	.8585
.0007	.8587	.8579	.8570	.8562	.8556	.8552	.8543	.8532	.8521	.8515	.8510	.8498
.0008	.8512	.8503	.8494	.8486	.8480	.8476	.8465	.8455	.8443	.8437	.8432	.8419
.0009	.8443	.8434	.8425	.8416	.8410	.8406	.8395	.8384	.8372	.8366	.8361	.8347
.0010	.8379	.8370	.8361	.8352	.8345	.8341	.8330	.8319	.8307	.8300	.8295	.8282
.0020	.7922	.7911	.7901	.7890	.7882	.7877	.7865	.7852	.7838	.7830	.7824	.7809
.0030	.7625	.7613	.7603	.7591	.7583	.7578	.7565	.7551	.7536	.7528	.7522	.7505
.0040	.7405	.7392	.7381	.7370	.7361	.7356	.7343	.7328	.7312	.7305	.7298	.7281
.0050	.7230	.7217	.7206	.7194	.7185	.7180	.7166	.7152	.7136	.7128	.7122	.7104
.0060	.7085	.7071	.7060	.7048	.7040	.7034	.7021	.7006	.6989	.6982	.6975	.6957
.0070	.6961	.6948	.6936	.6924	.6916	.6911	.6897	.6882	.6865	.6858	.6851	.6833
.0080	.6854	.6840	.6829	.6817	.6808	.6803	.6789	.6774	.6758	.6750	.6744	.6726
.0090	.6759	.6745	.6734	.6722	.6713	.6708	.6694	.6679	.6663	.6655	.6649	.6631
.0100	.6674	.6660	.6649	.6637	.6629	.6624	.6610	.6595	.6578	.6571	.6565	.6546
.0200	.6128	.6114	.6104	.6093	.6084	.6080	.6067	.6052	.6036	.6030	.6024	.6006
.0300	.5826	.5812	.5803	.5793	.5785	.5780	.5768	.5754	.5739	.5734	.5728	.5711
.0400	.5623	.5610	.5601	.5592	.5584	.5580	.5568	.5555	.5540	.5536	.5531	.5514
.0500	.5474	.5461	.5452	.5443	.5436	.5432	.5421	.5408	.5394	.5390	.5386	.5369
.0600	.5357	.5344	.5336	.5328	.5320	.5317	.5306	.5294	.5280	.5277	.5273	.5256
.0700	.5262	.5249	.5242	.5234	.5227	.5223	.5213	.5201	.5188	.5185	.5181	.5165
.0800	.5183	.5170	.5163	.5156	.5149	.5146	.5136	.5124	.5111	.5108	.5105	.5089
.0900	.5116	.5103	.5096	.5089	.5082	.5079	.5070	.5058	.5046	.5043	.5040	.5024
.1000	.5057	.5044	.5038	.5031	.5024	.5022	.5012	.5001	.4989	.4987	.4983	.4968

TABLE 117. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9332	.9326	.9319	.9312	.9304	.9297	.9289	.9280	.9272	.9263	.9254
.0002	.9094	.9085	.9076	.9067	.9057	.9047	.9037	.9026	.9015	.9004	.8992
.0003	.8923	.8913	.8903	.8892	.8881	.8870	.8858	.8846	.8833	.8820	.8806
.0004	.8787	.8776	.8765	.8753	.8741	.8729	.8716	.8702	.8688	.8674	.8659
.0005	.8673	.8661	.8649	.8637	.8624	.8610	.8597	.8582	.8567	.8552	.8536
.0006	.8574	.8562	.8549	.8535	.8522	.8508	.8494	.8478	.8462	.8447	.8430
.0007	.8486	.8473	.8460	.8446	.8432	.8417	.8402	.8386	.8370	.8354	.8336
.0008	.8407	.8394	.8380	.8365	.8351	.8335	.8320	.8304	.8287	.8270	.8252
.0009	.8335	.8321	.8307	.8292	.8277	.8261	.8246	.8229	.8211	.8194	.8176
.0010	.8269	.8255	.8240	.8225	.8209	.8193	.8177	.8160	.8142	.8124	.8105
.0020	.7794	.7778	.7761	.7744	.7726	.7708	.7690	.7670	.7650	.7630	.7609
.0030	.7490	.7473	.7454	.7437	.7418	.7399	.7381	.7359	.7338	.7318	.7296
.0040	.7265	.7248	.7229	.7211	.7192	.7172	.7154	.7132	.7110	.7089	.7067
.0050	.7088	.7071	.7051	.7033	.7014	.6993	.6975	.6953	.6931	.6910	.6888
.0060	.6942	.6924	.6904	.6886	.6867	.6847	.6829	.6806	.6784	.6763	.6741
.0070	.6818	.6800	.6780	.6762	.6743	.6722	.6704	.6682	.6660	.6639	.6617
.0080	.6710	.6693	.6673	.6654	.6635	.6615	.6597	.6575	.6552	.6532	.6510
.0090	.6615	.6598	.6578	.6560	.6541	.6521	.6503	.6481	.6459	.6438	.6417
.0100	.6531	.6514	.6494	.6476	.6457	.6437	.6420	.6397	.6375	.6355	.6334
.0200	.5993	.5977	.5957	.5940	.5923	.5904	.5889	.5868	.5847	.5829	.5809
.0300	.5698	.5684	.5665	.5649	.5633	.5615	.5602	.5582	.5562	.5546	.5528
.0400	.5502	.5489	.5470	.5456	.5440	.5423	.5412	.5392	.5373	.5359	.5342
.0500	.5359	.5346	.5328	.5314	.5299	.5283	.5273	.5254	.5236	.5222	.5207
.0600	.5247	.5234	.5217	.5204	.5190	.5174	.5165	.5147	.5129	.5116	.5102
.0700	.5156	.5144	.5127	.5115	.5101	.5086	.5077	.5060	.5043	.5031	.5017
.0800	.5080	.5069	.5053	.5041	.5028	.5013	.5005	.4988	.4972	.4960	.4947
.0900	.5016	.5006	.4989	.4977	.4965	.4951	.4943	.4927	.4911	.4900	.4887
.1000	.4961	.4950	.4934	.4923	.4911	.4897	.4890	.4874	.4859	.4848	.4836

TABLE 118. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9203	.9198	.9193	.9187	.9184	.9181	.9175	.9168	.9161	.9157	.9154	.9146
.0002	.8927	.8920	.8913	.8906	.8902	.8898	.8891	.8882	.8873	.8868	.8864	.8854
.0003	.8732	.8724	.8717	.8709	.8703	.8700	.8691	.8681	.8671	.8665	.8661	.8650
.0004	.8578	.8570	.8562	.8553	.8547	.8543	.8534	.8523	.8512	.8506	.8501	.8489
.0005	.8450	.8441	.8432	.8423	.8417	.8413	.8403	.8392	.8380	.8373	.8368	.8355
.0006	.8340	.8330	.8321	.8312	.8305	.8301	.8290	.8279	.8266	.8259	.8254	.8240
.0007	.8242	.8233	.8223	.8213	.8207	.8202	.8191	.8179	.8166	.8159	.8154	.8139
.0008	.8155	.8145	.8136	.8125	.8119	.8114	.8102	.8090	.8077	.8069	.8064	.8049
.0009	.8076	.8066	.8056	.8046	.8039	.8034	.8022	.8009	.7996	.7988	.7983	.7968
.0010	.8004	.7994	.7983	.7973	.7966	.7961	.7949	.7936	.7922	.7914	.7909	.7893
.0020	.7496	.7484	.7473	.7461	.7453	.7448	.7434	.7420	.7405	.7397	.7391	.7373
.0030	.7179	.7166	.7154	.7142	.7134	.7129	.7115	.7100	.7084	.7076	.7070	.7052
.0040	.6948	.6935	.6924	.6912	.6903	.6898	.6884	.6869	.6853	.6845	.6839	.6820
.0050	.6769	.6755	.6744	.6732	.6723	.6718	.6704	.6689	.6673	.6665	.6659	.6641
.0060	.6622	.6609	.6597	.6586	.6577	.6572	.6558	.6543	.6527	.6519	.6513	.6495
.0070	.6499	.6485	.6474	.6463	.6454	.6449	.6435	.6420	.6404	.6397	.6391	.6373
.0080	.6393	.6379	.6369	.6357	.6349	.6344	.6330	.6315	.6299	.6292	.6286	.6268
.0090	.6301	.6287	.6276	.6265	.6256	.6251	.6238	.6223	.6207	.6200	.6195	.6176
.0100	.6219	.6205	.6194	.6183	.6175	.6170	.6157	.6142	.6126	.6119	.6114	.6095
.0200	.5705	.5691	.5682	.5673	.5665	.5661	.5649	.5635	.5620	.5615	.5610	.5593
.0300	.5432	.5419	.5411	.5402	.5394	.5391	.5380	.5367	.5353	.5350	.5345	.5329
.0400	.5253	.5240	.5232	.5225	.5217	.5214	.5204	.5192	.5179	.5176	.5172	.5156
.0500	.5123	.5110	.5103	.5096	.5089	.5086	.5076	.5065	.5053	.5050	.5046	.5031
.0600	.5022	.5010	.5003	.4997	.4990	.4987	.4978	.4967	.4955	.4953	.4950	.4935
.0700	.4941	.4929	.4923	.4917	.4910	.4908	.4899	.4889	.4877	.4875	.4872	.4858
.0800	.4874	.4862	.4857	.4851	.4844	.4842	.4834	.4824	.4812	.4811	.4808	.4794
.0900	.4818	.4805	.4800	.4795	.4788	.4786	.4778	.4769	.4758	.4757	.4754	.4740
.1000	.4769	.4757	.4752	.4746	.4740	.4738	.4731	.4721	.4711	.4710	.4707	.4694

TABLE 118. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*—Continued

(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9139	.9130	.9122	.9113	.9104	.9094	.9084	.9074	.9063	.9053	.9041
.0002	.8844	.8834	.8823	.8812	.8800	.8788	.8776	.8762	.8749	.8735	.8721
.0003	.8639	.8627	.8614	.8601	.8588	.8575	.8561	.8546	.8531	.8515	.8499
.0004	.8477	.8464	.8450	.8437	.8422	.8408	.8393	.8377	.8360	.8344	.8326
.0005	.8343	.8329	.8314	.8300	.8285	.8269	.8254	.8237	.8219	.8202	.8184
.0006	.8227	.8213	.8198	.8183	.8167	.8151	.8135	.8117	.8099	.8081	.8062
.0007	.8126	.8111	.8095	.8080	.8064	.8047	.8030	.8012	.7993	.7975	.7955
.0008	.8035	.8020	.8004	.7988	.7972	.7954	.7937	.7918	.7899	.7880	.7860
.0009	.7954	.7938	.7922	.7905	.7889	.7871	.7854	.7834	.7814	.7795	.7775
.0010	.7879	.7863	.7846	.7830	.7813	.7794	.7777	.7757	.7737	.7718	.7697
.0020	.7358	.7341	.7322	.7304	.7285	.7265	.7247	.7226	.7204	.7183	.7161
.0030	.7036	.7019	.6999	.6981	.6962	.6941	.6923	.6901	.6879	.6858	.6836
.0040	.6805	.6788	.6768	.6749	.6730	.6710	.6692	.6669	.6647	.6627	.6604
.0050	.6625	.6608	.6588	.6570	.6551	.6531	.6513	.6491	.6468	.6448	.6427
.0060	.6480	.6463	.6443	.6425	.6406	.6386	.6369	.6346	.6324	.6304	.6283
.0070	.6358	.6341	.6321	.6303	.6284	.6265	.6248	.6226	.6204	.6185	.6164
.0080	.6253	.6237	.6217	.6199	.6181	.6161	.6145	.6123	.6101	.6082	.6062
.0090	.6162	.6146	.6126	.6108	.6090	.6071	.6055	.6033	.6012	.5993	.5973
.0100	.6081	.6065	.6046	.6028	.6011	.5991	.5976	.5954	.5933	.5915	.5895
.0200	.5581	.5567	.5549	.5534	.5518	.5500	.5488	.5468	.5449	.5434	.5417
.0300	.5318	.5306	.5288	.5274	.5260	.5244	.5234	.5215	.5198	.5184	.5169
.0400	.5147	.5135	.5118	.5106	.5092	.5078	.5069	.5051	.5035	.5022	.5009
.0500	.5023	.5012	.4996	.4984	.4971	.4958	.4950	.4933	.4917	.4906	.4894
.0600	.4927	.4918	.4901	.4890	.4879	.4865	.4859	.4843	.4827	.4817	.4805
.0700	.4851	.4842	.4826	.4815	.4804	.4791	.4785	.4770	.4755	.4746	.4735
.0800	.4788	.4779	.4763	.4753	.4743	.4730	.4725	.4710	.4696	.4687	.4677
.0900	.4734	.4726	.4711	.4701	.4691	.4679	.4674	.4659	.4646	.4637	.4627
.1000	.4688	.4680	.4665	.4656	.4646	.4635	.4630	.4616	.4603	.4595	.4585

TABLE 119. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*

(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9117	.9111	.9105	.9099	.9095	.9093	.9086	.9079	.9071	.9067	.9063	.9055
.0002	.8817	.8809	.8802	.8795	.8790	.8786	.8778	.8769	.8759	.8753	.8749	.8738
.0003	.8607	.8599	.8591	.8582	.8577	.8573	.8563	.8553	.8542	.8536	.8531	.8519
.0004	.8443	.8434	.8425	.8416	.8410	.8406	.8395	.8384	.8372	.8366	.8361	.8347
.0005	.8306	.8297	.8288	.8278	.8272	.8267	.8256	.8245	.8232	.8225	.8220	.8206
.0006	.8190	.8180	.8170	.8160	.8153	.8149	.8137	.8125	.8112	.8105	.8099	.8085
.0007	.8087	.8077	.8067	.8056	.8049	.8045	.8033	.8020	.8007	.7999	.7994	.7979
.0008	.7996	.7985	.7975	.7964	.7957	.7952	.7940	.7927	.7913	.7906	.7900	.7885
.0009	.7913	.7902	.7892	.7881	.7873	.7869	.7856	.7843	.7829	.7821	.7815	.7800
.0010	.7838	.7826	.7816	.7805	.7797	.7792	.7780	.7766	.7752	.7744	.7738	.7722
.0020	.7313	.7300	.7289	.7277	.7269	.7264	.7250	.7235	.7219	.7212	.7205	.7188
.0030	.6990	.6977	.6966	.6954	.6945	.6940	.6926	.6911	.6895	.6887	.6881	.6862
.0040	.6759	.6745	.6734	.6722	.6713	.6708	.6694	.6679	.6663	.6655	.6649	.6631
.0050	.6580	.6566	.6555	.6543	.6535	.6529	.6516	.6501	.6484	.6477	.6471	.6452
.0060	.6434	.6421	.6410	.6398	.6390	.6385	.6371	.6356	.6340	.6333	.6327	.6308
.0070	.6313	.6299	.6288	.6277	.6269	.6264	.6250	.6235	.6219	.6213	.6207	.6188
.0080	.6209	.6195	.6185	.6174	.6165	.6160	.6147	.6132	.6116	.6110	.6104	.6086
.0090	.6119	.6105	.6094	.6083	.6075	.6070	.6057	.6043	.6027	.6021	.6015	.5997
.0100	.6039	.6025	.6015	.6004	.5996	.5991	.5978	.5964	.5948	.5942	.5937	.5919
.0200	.5544	.5530	.5522	.5513	.5505	.5501	.5490	.5477	.5462	.5458	.5453	.5437
.0300	.5284	.5271	.5264	.5256	.5248	.5245	.5235	.5223	.5210	.5206	.5202	.5186
.0400	.5116	.5103	.5096	.5089	.5082	.5079	.5070	.5058	.5046	.5043	.5040	.5024
.0500	.4994	.4981	.4975	.4969	.4962	.4959	.4950	.4940	.4928	.4926	.4923	.4908
.0600	.4900	.4888	.4882	.4876	.4870	.4867	.4859	.4849	.4837	.4836	.4833	.4819
.0700	.4825	.4813	.4808	.4802	.4796	.4794	.4786	.4776	.4765	.4764	.4761	.4747
.0800	.4763	.4751	.4746	.4741	.4735	.4733	.4725	.4716	.4705	.4704	.4702	.4688
.0900	.4710	.4699	.4694	.4689	.4683	.4681	.4674	.4665	.4655	.4654	.4651	.4638
.1000	.4665	.4654	.4649	.4645	.4639	.4637	.4630	.4621	.4611	.4611	.4608	.4596

TABLE 119. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9047	.9038	.9028	.9018	.9009	.8998	.8988	.8976	.8965	.8953	.8940
.0002	.8728	.8717	.8705	.8693	.8680	.8667	.8654	.8640	.8625	.8611	.8595
.0003	.8507	.8494	.8481	.8467	.8453	.8439	.8424	.8408	.8392	.8376	.8359
.0004	.8335	.8321	.8307	.8292	.8277	.8261	.8246	.8229	.8211	.8194	.8176
.0005	.8193	.8178	.8163	.8148	.8132	.8115	.8099	.8081	.8063	.8045	.8025
.0006	.8071	.8056	.8040	.8024	.8008	.7991	.7974	.7955	.7936	.7918	.7898
.0007	.7965	.7949	.7933	.7917	.7900	.7882	.7865	.7845	.7826	.7807	.7786
.0008	.7870	.7854	.7837	.7821	.7804	.7785	.7768	.7748	.7728	.7709	.7688
.0009	.7785	.7769	.7752	.7735	.7717	.7699	.7681	.7661	.7640	.7621	.7599
.0010	.7707	.7691	.7673	.7656	.7638	.7620	.7602	.7581	.7561	.7541	.7519
.0020	.7172	.7155	.7135	.7117	.7098	.7078	.7060	.7038	.7015	.6995	.6973
.0030	.6847	.6829	.6810	.6791	.6772	.6752	.6734	.6711	.6689	.6668	.6646
.0040	.6615	.6598	.6578	.6560	.6541	.6521	.6503	.6481	.6459	.6438	.6417
.0050	.6437	.6421	.6400	.6382	.6364	.6344	.6327	.6304	.6282	.6263	.6242
.0060	.6294	.6277	.6257	.6239	.6221	.6201	.6185	.6163	.6141	.6122	.6101
.0070	.6174	.6158	.6138	.6120	.6102	.6083	.6067	.6045	.6024	.6005	.5985
.0080	.6072	.6056	.6036	.6019	.6001	.5982	.5967	.5945	.5924	.5906	.5886
.0090	.5983	.5968	.5948	.5931	.5914	.5895	.5880	.5859	.5838	.5820	.5800
.0100	.5905	.5890	.5870	.5854	.5836	.5818	.5803	.5782	.5762	.5744	.5725
.0200	.5426	.5412	.5394	.5380	.5365	.5348	.5337	.5318	.5300	.5286	.5270
.0300	.5177	.5165	.5148	.5135	.5122	.5107	.5098	.5080	.5063	.5051	.5037
.0400	.5016	.5006	.4989	.4977	.4965	.4951	.4943	.4927	.4911	.4900	.4887
.0500	.4901	.4891	.4875	.4864	.4852	.4839	.4833	.4817	.4802	.4792	.4781
.0600	.4812	.4803	.4787	.4777	.4766	.4754	.4748	.4733	.4719	.4710	.4699
.0700	.4741	.4733	.4717	.4708	.4697	.4686	.4681	.4666	.4652	.4644	.4634
.0800	.4683	.4675	.4660	.4651	.4641	.4629	.4625	.4611	.4598	.4590	.4580
.0900	.4633	.4626	.4611	.4602	.4593	.4582	.4578	.4564	.4551	.4544	.4535
.1000	.4591	.4584	.4569	.4561	.4552	.4541	.4538	.4524	.4512	.4505	.4496

TABLE 120. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8873	.8866	.8859	.8852	.8847	.8843	.8835	.8826	.8817	.8812	.8808	.8797
.0002	.8512	.8503	.8494	.8486	.8480	.8476	.8465	.8455	.8443	.8437	.8432	.8419
.0003	.8266	.8256	.8247	.8237	.8230	.8226	.8215	.8203	.8190	.8183	.8178	.8164
.0004	.8076	.8066	.8056	.8046	.8039	.8034	.8022	.8009	.7996	.7988	.7983	.7968
.0005	.7922	.7911	.7901	.7890	.7882	.7877	.7865	.7852	.7838	.7830	.7824	.7809
.0006	.7791	.7779	.7769	.7758	.7750	.7745	.7732	.7719	.7704	.7696	.7691	.7674
.0007	.7677	.7665	.7654	.7643	.7635	.7630	.7617	.7603	.7588	.7581	.7575	.7558
.0008	.7576	.7564	.7554	.7542	.7534	.7529	.7516	.7502	.7486	.7478	.7472	.7455
.0009	.7486	.7474	.7463	.7452	.7443	.7438	.7425	.7411	.7395	.7387	.7381	.7364
.0010	.7405	.7392	.7381	.7370	.7361	.7356	.7343	.7328	.7312	.7305	.7298	.7281
.0020	.6854	.6840	.6829	.6817	.6808	.6803	.6789	.6774	.6758	.6750	.6744	.6726
.0030	.6528	.6514	.6503	.6492	.6483	.6478	.6464	.6449	.6433	.6426	.6420	.6401
.0040	.6301	.6287	.6276	.6265	.6256	.6251	.6238	.6223	.6207	.6200	.6195	.6176
.0050	.6128	.6114	.6104	.6093	.6084	.6080	.6067	.6052	.6036	.6030	.6024	.6006
.0060	.5990	.5976	.5966	.5956	.5947	.5943	.5930	.5916	.5900	.5895	.5889	.5871
.0070	.5876	.5862	.5853	.5843	.5834	.5830	.5817	.5803	.5788	.5783	.5777	.5760
.0080	.5780	.5766	.5757	.5747	.5739	.5734	.5722	.5708	.5693	.5688	.5683	.5666
.0090	.5696	.5683	.5674	.5664	.5656	.5652	.5640	.5627	.5612	.5607	.5602	.5585
.0100	.5623	.5610	.5601	.5592	.5584	.5580	.5568	.5555	.5540	.5536	.5531	.5514
.0200	.5183	.5170	.5163	.5156	.5149	.5146	.5136	.5124	.5111	.5108	.5105	.5089
.0300	.4960	.4948	.4942	.4935	.4929	.4926	.4917	.4907	.4895	.4893	.4890	.4876
.0400	.4818	.4805	.4800	.4795	.4788	.4786	.4778	.4769	.4758	.4757	.4754	.4740
.0500	.4716	.4704	.4700	.4695	.4689	.4687	.4679	.4670	.4660	.4659	.4657	.4643
.0600	.4638	.4627	.4623	.4618	.4613	.4611	.4604	.4595	.4585	.4585	.4583	.4570
.0700	.4577	.4565	.4562	.4558	.4552	.4551	.4544	.4536	.4526	.4526	.4524	.4512
.0800	.4526	.4515	.4512	.4508	.4502	.4501	.4495	.4487	.4478	.4478	.4476	.4464
.0900	.4484	.4473	.4469	.4466	.4461	.4459	.4454	.4445	.4437	.4437	.4435	.4424
.1000	.4447	.4436	.4433	.4430	.4425	.4424	.4418	.4410	.4402	.4403	.4401	.4389

TABLE 120. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8787	.8776	.8765	.8753	.8741	.8729	.8716	.8702	.8688	.8674	.8659
.0002	.8407	.8394	.8380	.8365	.8351	.8335	.8320	.8304	.8287	.8270	.8252
.0003	.8150	.8136	.8120	.8104	.8089	.8072	.8055	.8037	.8018	.8000	.7981
.0004	.7954	.7938	.7922	.7905	.7889	.7871	.7854	.7834	.7814	.7795	.7775
.0005	.7794	.7778	.7761	.7744	.7726	.7708	.7690	.7670	.7650	.7630	.7609
.0006	.7659	.7643	.7625	.7608	.7590	.7571	.7553	.7532	.7511	.7491	.7470
.0007	.7543	.7526	.7508	.7490	.7472	.7452	.7434	.7413	.7392	.7372	.7350
.0008	.7440	.7423	.7404	.7387	.7368	.7348	.7330	.7309	.7287	.7267	.7245
.0009	.7348	.7331	.7312	.7294	.7275	.7256	.7237	.7216	.7194	.7173	.7151
.0010	.7265	.7248	.7229	.7211	.7192	.7172	.7154	.7132	.7110	.7089	.7067
.0020	.6710	.6693	.6673	.6654	.6635	.6615	.6597	.6575	.6552	.6532	.6510
.0030	.6386	.6370	.6349	.6332	.6313	.6293	.6276	.6254	.6232	.6213	.6192
.0040	.6162	.6146	.6126	.6108	.6090	.6071	.6055	.6033	.6012	.5993	.5973
.0050	.5993	.5977	.5957	.5940	.5923	.5904	.5889	.5868	.5847	.5829	.5809
.0060	.5858	.5843	.5823	.5807	.5790	.5771	.5757	.5736	.5716	.5699	.5680
.0070	.5747	.5732	.5713	.5697	.5681	.5663	.5649	.5629	.5609	.5592	.5574
.0080	.5654	.5639	.5620	.5605	.5589	.5571	.5558	.5538	.5518	.5503	.5485
.0090	.5573	.5559	.5540	.5525	.5509	.5492	.5480	.5460	.5441	.5426	.5409
.0100	.5502	.5489	.5470	.5456	.5440	.5423	.5412	.5392	.5373	.5359	.5342
.0200	.5080	.5069	.5053	.5041	.5028	.5013	.5005	.4988	.4972	.4960	.4947
.0300	.4869	.4859	.4843	.4833	.4821	.4809	.4802	.4787	.4772	.4762	.4751
.0400	.4734	.4726	.4711	.4701	.4691	.4679	.4674	.4659	.4646	.4637	.4627
.0500	.4638	.4631	.4616	.4607	.4598	.4587	.4583	.4569	.4556	.4549	.4540
.0600	.4566	.4559	.4545	.4536	.4527	.4517	.4514	.4501	.4488	.4482	.4474
.0700	.4508	.4501	.4488	.4480	.4472	.4462	.4459	.4446	.4435	.4429	.4421
.0800	.4460	.4454	.4441	.4434	.4426	.4416	.4414	.4402	.4391	.4385	.4378
.0900	.4420	.4415	.4402	.4395	.4387	.4378	.4377	.4365	.4354	.4348	.4342
.1000	.4386	.4381	.4368	.4362	.4354	.4345	.4344	.4333	.4322	.4317	.4311

TABLE 121. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis—Bjerrum*
(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8578	.8570	.8562	.8553	.8547	.8543	.8534	.8523	.8512	.8506	.8501	.8489
.0002	.8155	.8145	.8136	.8125	.8119	.8114	.8102	.8090	.8077	.8069	.8064	.8049
.0003	.7876	.7865	.7854	.7843	.7836	.7831	.7819	.7805	.7791	.7783	.7777	.7761
.0004	.7665	.7653	.7643	.7631	.7624	.7618	.7605	.7591	.7576	.7569	.7563	.7546
.0005	.7496	.7484	.7473	.7461	.7453	.7448	.7434	.7420	.7405	.7397	.7391	.7373
.0006	.7355	.7342	.7331	.7319	.7311	.7306	.7292	.7277	.7262	.7254	.7248	.7230
.0007	.7233	.7220	.7209	.7197	.7189	.7184	.7170	.7155	.7139	.7131	.7125	.7107
.0008	.7127	.7114	.7103	.7091	.7082	.7077	.7063	.7048	.7032	.7024	.7018	.7000
.0009	.7033	.7020	.7008	.6996	.6988	.6983	.6969	.6954	.6938	.6930	.6924	.6905
.0010	.6948	.6935	.6924	.6912	.6903	.6898	.6884	.6869	.6853	.6845	.6839	.6820
.0020	.6393	.6379	.6369	.6357	.6349	.6344	.6330	.6315	.6299	.6292	.6286	.6268
.0030	.6079	.6065	.6055	.6044	.6036	.6031	.6018	.6003	.5988	.5982	.5976	.5958
.0040	.5865	.5851	.5841	.5831	.5823	.5819	.5806	.5792	.5777	.5772	.5766	.5749
.0050	.5705	.5691	.5682	.5673	.5665	.5661	.5649	.5635	.5620	.5615	.5610	.5593
.0060	.5580	.5566	.5557	.5548	.5540	.5536	.5525	.5512	.5497	.5493	.5488	.5471
.0070	.5477	.5463	.5455	.5446	.5439	.5435	.5424	.5411	.5397	.5393	.5388	.5372
.0080	.5391	.5377	.5370	.5361	.5354	.5350	.5339	.5327	.5313	.5309	.5305	.5289
.0090	.5317	.5304	.5296	.5288	.5281	.5277	.5267	.5255	.5241	.5238	.5234	.5218
.0100	.5253	.5240	.5232	.5225	.5217	.5214	.5204	.5192	.5179	.5176	.5172	.5156
.0200	.4874	.4862	.4857	.4851	.4844	.4842	.4834	.4824	.4812	.4811	.4808	.4794
.0300	.4688	.4676	.4672	.4667	.4661	.4659	.4652	.4643	.4633	.4633	.4630	.4617
.0400	.4571	.4559	.4556	.4552	.4546	.4545	.4538	.4530	.4520	.4521	.4518	.4506
.0500	.4488	.4477	.4474	.4470	.4465	.4464	.4458	.4450	.4441	.4442	.4440	.4428
.0600	.4425	.4415	.4412	.4409	.4403	.4403	.4397	.4389	.4381	.4382	.4380	.4369
.0700	.4376	.4365	.4363	.4360	.4355	.4354	.4349	.4342	.4333	.4335	.4333	.4322
.0800	.4335	.4325	.4323	.4320	.4315	.4315	.4310	.4303	.4295	.4296	.4295	.4284
.0900	.4301	.4291	.4289	.4287	.4282	.4281	.4277	.4270	.4262	.4264	.4263	.4252
.1000	.4272	.4262	.4260	.4258	.4253	.4253	.4249	.4242	.4235	.4237	.4235	.4225

TABLE 121. *Mean activity coefficients of electrolytes in aqueous solutions on a volume basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8477	.8464	.8450	.8437	.8422	.8408	.8393	.8377	.8360	.8344	.8326
.0002	.8035	.8020	.8004	.7988	.7972	.7954	.7937	.7918	.7899	.7880	.7860
.0003	.7747	.7731	.7713	.7696	.7678	.7660	.7642	.7622	.7601	.7581	.7560
.0004	.7531	.7514	.7496	.7478	.7460	.7440	.7422	.7401	.7380	.7359	.7337
.0005	.7358	.7341	.7322	.7304	.7285	.7265	.7247	.7226	.7204	.7183	.7161
.0006	.7214	.7197	.7178	.7160	.7141	.7121	.7102	.7080	.7058	.7038	.7015
.0007	.7091	.7074	.7055	.7036	.7017	.6997	.6979	.6957	.6934	.6914	.6891
.0008	.6984	.6967	.6947	.6929	.6910	.6890	.6871	.6849	.6827	.6806	.6784
.0009	.6890	.6872	.6852	.6834	.6815	.6795	.6777	.6754	.6732	.6711	.6689
.0010	.6805	.6788	.6768	.6749	.6730	.6710	.6692	.6669	.6647	.6627	.6604
.0020	.6253	.6237	.6217	.6199	.6181	.6161	.6145	.6123	.6101	.6082	.6062
.0030	.5945	.5929	.5909	.5893	.5875	.5856	.5842	.5821	.5800	.5782	.5763
.0040	.5736	.5721	.5702	.5686	.5670	.5652	.5638	.5618	.5598	.5582	.5564
.0050	.5581	.5567	.5549	.5534	.5518	.5500	.5488	.5468	.5449	.5434	.5417
.0060	.5460	.5447	.5428	.5414	.5399	.5382	.5371	.5351	.5333	.5318	.5302
.0070	.5361	.5349	.5331	.5317	.5302	.5286	.5275	.5257	.5239	.5225	.5209
.0080	.5279	.5266	.5249	.5235	.5221	.5206	.5196	.5177	.5160	.5147	.5132
.0090	.5208	.5196	.5179	.5166	.5152	.5137	.5128	.5110	.5093	.5080	.5066
.0100	.5147	.5135	.5118	.5106	.5092	.5078	.5069	.5051	.5035	.5022	.5009
.0200	.4788	.4779	.4763	.4753	.4743	.4730	.4725	.4710	.4696	.4687	.4677
.0300	.4612	.4605	.4590	.4582	.4572	.4562	.4558	.4544	.4532	.4525	.4516
.0400	.4502	.4496	.4482	.4474	.4466	.4456	.4454	.4441	.4429	.4423	.4416
.0500	.4425	.4419	.4406	.4399	.4391	.4382	.4381	.4368	.4357	.4352	.4346
.0600	.4366	.4361	.4348	.4342	.4335	.4326	.4325	.4314	.4303	.4299	.4293
.0700	.4320	.4315	.4303	.4297	.4290	.4282	.4282	.4271	.4260	.4256	.4251
.0800	.4282	.4278	.4266	.4260	.4254	.4246	.4246	.4235	.4225	.4222	.4217
.0900	.4251	.4246	.4235	.4229	.4223	.4216	.4216	.4206	.4196	.4193	.4188
.1000	.4224	.4220	.4208	.4203	.4197	.4190	.4191	.4181	.4171	.4168	.4164

TABLE 122. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*
(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9889	.9888	.9887	.9886	.9886	.9885	.9884	.9883	.9882	.9882	.9881	.9880
.0002	.9844	.9843	.9841	.9840	.9840	.9839	.9838	.9836	.9835	.9834	.9834	.9832
.0003	.9809	.9808	.9807	.9805	.9805	.9804	.9802	.9801	.9799	.9798	.9797	.9795
.0004	.9781	.9779	.9778	.9776	.9775	.9775	.9773	.9771	.9769	.9768	.9767	.9765
.0005	.9756	.9754	.9753	.9751	.9750	.9749	.9747	.9745	.9743	.9741	.9741	.9738
.0006	.9734	.9732	.9730	.9728	.9727	.9726	.9724	.9722	.9719	.9718	.9717	.9714
.0007	.9713	.9711	.9709	.9707	.9706	.9705	.9703	.9700	.9698	.9696	.9695	.9692
.0008	.9694	.9692	.9690	.9688	.9687	.9686	.9683	.9681	.9678	.9676	.9675	.9672
.0009	.9677	.9675	.9672	.9670	.9669	.9667	.9665	.9662	.9659	.9658	.9657	.9653
.0010	.9660	.9658	.9656	.9653	.9652	.9650	.9648	.9645	.9642	.9640	.9639	.9636
.0020	.9529	.9526	.9523	.9520	.9518	.9516	.9513	.9509	.9505	.9502	.9501	.9496
.0030	.9433	.9429	.9425	.9421	.9419	.9417	.9413	.9408	.9403	.9401	.9399	.9393
.0040	.9354	.9349	.9345	.9341	.9338	.9336	.9331	.9326	.9321	.9317	.9315	.9309
.0050	.9285	.9281	.9276	.9271	.9268	.9266	.9261	.9255	.9250	.9246	.9244	.9237
.0060	.9225	.9220	.9215	.9210	.9207	.9205	.9199	.9193	.9187	.9183	.9180	.9174
.0070	.9171	.9166	.9161	.9155	.9152	.9149	.9143	.9137	.9130	.9126	.9123	.9116
.0080	.9121	.9116	.9110	.9105	.9101	.9098	.9092	.9085	.9079	.9074	.9071	.9064
.0090	.9076	.9070	.9064	.9058	.9054	.9052	.9045	.9038	.9031	.9027	.9024	.9016
.0100	.9033	.9027	.9021	.9015	.9011	.9008	.9001	.8994	.8986	.8982	.8979	.8971
.0200	.8711	.8703	.8696	.8688	.8683	.8680	.8671	.8662	.8653	.8647	.8643	.8633
.0300	.8488	.8479	.8471	.8462	.8457	.8453	.8443	.8433	.8422	.8416	.8412	.8400
.0400	.8314	.8305	.8296	.8286	.8281	.8276	.8266	.8255	.8244	.8237	.8233	.8220
.0500	.8171	.8161	.8152	.8142	.8135	.8131	.8120	.8109	.8097	.8090	.8085	.8072
.0600	.8048	.8038	.8028	.8018	.8012	.8007	.7996	.7984	.7972	.7965	.7960	.7946
.0700	.7941	.7931	.7921	.7910	.7904	.7899	.7888	.7875	.7862	.7855	.7850	.7836
.0800	.7846	.7835	.7825	.7814	.7808	.7803	.7791	.7779	.7765	.7758	.7753	.7739
.0900	.7761	.7749	.7739	.7728	.7721	.7716	.7704	.7692	.7678	.7671	.7666	.7651
.1000	.7683	.7671	.7661	.7650	.7643	.7638	.7626	.7613	.7599	.7592	.7586	.7571

TABLE 122. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 1$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9879	.9878	.9877	.9876	.9874	.9873	.9872	.9870	.9869	.9867	.9866
.0002	.9830	.9829	.9827	.9825	.9824	.9822	.9820	.9818	.9816	.9814	.9811
.0003	.9794	.9792	.9790	.9787	.9785	.9783	.9781	.9778	.9776	.9773	.9771
.0004	.9763	.9760	.9758	.9756	.9753	.9751	.9748	.9745	.9742	.9740	.9736
.0005	.9736	.9733	.9731	.9728	.9725	.9723	.9720	.9717	.9713	.9710	.9707
.0006	.9712	.9709	.9706	.9703	.9700	.9697	.9694	.9691	.9687	.9684	.9680
.0007	.9690	.9687	.9684	.9681	.9678	.9674	.9671	.9667	.9664	.9660	.9656
.0008	.9669	.9666	.9663	.9660	.9656	.9653	.9649	.9645	.9642	.9638	.9633
.0009	.9650	.9647	.9644	.9640	.9637	.9633	.9629	.9625	.9621	.9617	.9612
.0010	.9633	.9629	.9626	.9622	.9618	.9614	.9610	.9606	.9602	.9597	.9593
.0020	.9492	.9487	.9483	.9478	.9473	.9467	.9462	.9456	.9450	.9445	.9438
.0030	.9388	.9383	.9377	.9371	.9365	.9359	.9353	.9346	.9339	.9332	.9325
.0040	.9304	.9298	.9291	.9285	.9278	.9271	.9264	.9256	.9249	.9241	.9233
.0050	.9231	.9224	.9217	.9210	.9203	.9195	.9188	.9180	.9171	.9163	.9154
.0060	.9167	.9160	.9152	.9145	.9137	.9129	.9121	.9112	.9103	.9094	.9084
.0070	.9109	.9102	.9094	.9086	.9077	.9069	.9060	.9051	.9041	.9032	.9021
.0080	.9056	.9048	.9040	.9032	.9023	.9014	.9005	.8995	.8985	.8975	.8965
.0090	.9008	.9000	.8991	.8982	.8973	.8964	.8954	.8944	.8934	.8923	.8912
.0100	.8963	.8954	.8945	.8936	.8927	.8917	.8907	.8897	.8886	.8875	.8863
.0200	.8623	.8612	.8601	.8590	.8578	.8566	.8554	.8541	.8527	.8514	.8500
.0300	.8389	.8378	.8365	.8352	.8339	.8326	.8313	.8298	.8283	.8269	.8253
.0400	.8208	.8196	.8182	.8169	.8155	.8141	.8127	.8111	.8095	.8079	.8063
.0500	.8060	.8047	.8032	.8018	.8004	.7989	.7974	.7958	.7941	.7925	.7908
.0600	.7933	.7920	.7905	.7890	.7875	.7860	.7845	.7828	.7810	.7794	.7776
.0700	.7823	.7809	.7794	.7779	.7763	.7747	.7732	.7715	.7697	.7680	.7662
.0800	.7725	.7711	.7695	.7680	.7664	.7648	.7633	.7615	.7597	.7580	.7561
.0900	.7638	.7623	.7607	.7591	.7575	.7559	.7544	.7526	.7507	.7490	.7471
.1000	.7558	.7543	.7527	.7511	.7495	.7478	.7463	.7444	.7426	.7408	.7389

TABLE 123. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9781	.9779	.9778	.9776	.9775	.9775	.9773	.9771	.9769	.9768	.9767	.9765
.0002	.9694	.9692	.9690	.9688	.9687	.9686	.9683	.9681	.9678	.9676	.9675	.9672
.0003	.9630	.9627	.9625	.9622	.9620	.9619	.9616	.9613	.9610	.9608	.9607	.9603
.0004	.9576	.9573	.9570	.9567	.9565	.9564	.9561	.9557	.9554	.9551	.9550	.9546
.0005	.9529	.9526	.9523	.9520	.9518	.9516	.9513	.9509	.9505	.9502	.9501	.9496
.0006	.9488	.9485	.9481	.9478	.9475	.9474	.9470	.9466	.9461	.9459	.9457	.9452
.0007	.9450	.9447	.9443	.9439	.9437	.9435	.9431	.9427	.9422	.9419	.9417	.9412
.0008	.9416	.9412	.9408	.9404	.9401	.9400	.9395	.9391	.9386	.9383	.9381	.9375
.0009	.9384	.9380	.9376	.9371	.9369	.9367	.9362	.9357	.9352	.9349	.9347	.9341
.0010	.9354	.9349	.9345	.9341	.9338	.9336	.9331	.9326	.9321	.9317	.9315	.9309
.0020	.9121	.9116	.9110	.9105	.9101	.9098	.9092	.9085	.9079	.9074	.9071	.9064
.0030	.8955	.8949	.8942	.8936	.8932	.8929	.8921	.8914	.8906	.8901	.8898	.8889
.0040	.8823	.8815	.8808	.8801	.8797	.8793	.8785	.8777	.8768	.8763	.8759	.8750
.0050	.8711	.8703	.8696	.8688	.8683	.8680	.8671	.8662	.8653	.8647	.8643	.8633
.0060	.8614	.8606	.8598	.8589	.8584	.8581	.8572	.8562	.8552	.8547	.8542	.8532
.0070	.8528	.8519	.8511	.8502	.8497	.8493	.8484	.8474	.8463	.8457	.8453	.8442
.0080	.8450	.8441	.8433	.8424	.8418	.8414	.8405	.8394	.8383	.8377	.8373	.8361
.0090	.8379	.8370	.8361	.8352	.8346	.8342	.8332	.8322	.8311	.8304	.8300	.8288
.0100	.8314	.8305	.8296	.8286	.8281	.8276	.8266	.8255	.8244	.8237	.8233	.8220
.0200	.7846	.7835	.7825	.7814	.7808	.7803	.7791	.7779	.7765	.7758	.7753	.7739
.0300	.7545	.7533	.7523	.7511	.7504	.7499	.7487	.7473	.7460	.7452	.7447	.7431
.0400	.7322	.7310	.7299	.7287	.7280	.7275	.7262	.7249	.7234	.7227	.7221	.7205
.0500	.7146	.7133	.7122	.7110	.7103	.7098	.7085	.7071	.7056	.7049	.7043	.7027
.0600	.7000	.6987	.6976	.6964	.6957	.6952	.6939	.6924	.6910	.6903	.6897	.6880
.0700	.6876	.6863	.6852	.6840	.6832	.6827	.6814	.6800	.6785	.6779	.6773	.6756
.0800	.6768	.6755	.6745	.6733	.6725	.6720	.6707	.6693	.6678	.6671	.6665	.6649
.0900	.6674	.6660	.6650	.6638	.6630	.6625	.6612	.6598	.6583	.6577	.6571	.6554
.1000	.6589	.6576	.6565	.6553	.6546	.6541	.6528	.6514	.6499	.6493	.6487	.6470

TABLE 123. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 2$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9763	.9760	.9758	.9756	.9753	.9751	.9748	.9745	.9742	.9740	.9736
.0002	.9669	.9666	.9663	.9660	.9656	.9653	.9649	.9645	.9642	.9638	.9633
.0003	.9600	.9596	.9592	.9588	.9584	.9580	.9576	.9571	.9566	.9561	.9556
.0004	.9542	.9538	.9533	.9529	.9524	.9520	.9515	.9509	.9504	.9499	.9493
.0005	.9492	.9487	.9483	.9478	.9473	.9467	.9462	.9456	.9450	.9445	.9438
.0006	.9448	.9443	.9437	.9432	.9427	.9421	.9415	.9409	.9403	.9396	.9390
.0007	.9407	.9402	.9396	.9391	.9385	.9379	.9373	.9366	.9360	.9353	.9346
.0008	.9370	.9365	.9359	.9353	.9347	.9340	.9334	.9327	.9320	.9313	.9305
.0009	.9336	.9330	.9324	.9318	.9311	.9304	.9298	.9290	.9283	.9276	.9268
.0010	.9304	.9298	.9291	.9285	.9278	.9271	.9264	.9256	.9249	.9241	.9233
.0020	.9056	.9048	.9040	.9032	.9023	.9014	.9005	.8995	.8985	.8975	.8965
.0030	.8880	.8871	.8862	.8852	.8842	.8832	.8821	.8810	.8799	.8787	.8775
.0040	.8740	.8730	.8720	.8709	.8698	.8687	.8676	.8664	.8651	.8639	.8625
.0050	.8623	.8612	.8601	.8590	.8578	.8566	.8554	.8541	.8527	.8514	.8500
.0060	.8521	.8510	.8498	.8486	.8474	.8461	.8449	.8435	.8421	.8407	.8392
.0070	.8431	.8419	.8407	.8394	.8382	.8369	.8356	.8341	.8327	.8312	.8297
.0080	.8350	.8338	.8325	.8312	.8299	.8285	.8272	.8257	.8242	.8227	.8211
.0090	.8276	.8264	.8250	.8237	.8224	.8210	.8196	.8181	.8165	.8150	.8134
.0100	.8208	.8196	.8182	.8169	.8155	.8141	.8127	.8111	.8095	.8079	.8063
.0200	.7725	.7711	.7695	.7680	.7664	.7648	.7633	.7615	.7597	.7580	.7561
.0300	.7417	.7403	.7386	.7370	.7353	.7336	.7321	.7302	.7283	.7265	.7246
.0400	.7191	.7176	.7159	.7142	.7126	.7108	.7092	.7073	.7054	.7036	.7016
.0500	.7013	.6998	.6980	.6964	.6947	.6929	.6913	.6894	.6874	.6856	.6837
.0600	.6866	.6851	.6833	.6817	.6800	.6782	.6767	.6747	.6727	.6710	.6690
.0700	.6742	.6727	.6709	.6693	.6676	.6658	.6643	.6623	.6603	.6586	.6567
.0800	.6635	.6620	.6602	.6585	.6568	.6551	.6536	.6517	.6497	.6479	.6460
.0900	.6541	.6526	.6507	.6491	.6474	.6457	.6442	.6423	.6403	.6386	.6367
.1000	.6457	.6442	.6424	.6408	.6391	.6374	.6359	.6340	.6320	.6303	.6284

TABLE 124. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9677	.9675	.9672	.9670	.9669	.9667	.9665	.9662	.9659	.9658	.9657	.9653
.0002	.9552	.9549	.9546	.9543	.9541	.9539	.9536	.9532	.9528	.9526	.9524	.9520
.0003	.9459	.9456	.9452	.9448	.9446	.9444	.9440	.9436	.9431	.9429	.9427	.9422
.0004	.9384	.9380	.9376	.9371	.9369	.9367	.9362	.9357	.9352	.9349	.9347	.9341
.0005	.9318	.9314	.9310	.9305	.9302	.9300	.9295	.9289	.9284	.9281	.9278	.9272
.0006	.9261	.9256	.9251	.9246	.9243	.9241	.9235	.9230	.9224	.9220	.9218	.9211
.0007	.9208	.9203	.9198	.9193	.9190	.9187	.9182	.9176	.9169	.9165	.9163	.9156
.0008	.9161	.9155	.9150	.9145	.9141	.9139	.9133	.9126	.9119	.9116	.9113	.9105
.0009	.9117	.9111	.9106	.9100	.9096	.9094	.9087	.9081	.9074	.9069	.9067	.9059
.0010	.9076	.9070	.9064	.9058	.9054	.9052	.9045	.9038	.9031	.9027	.9024	.9016
.0020	.8765	.8757	.8750	.8742	.8738	.8734	.8726	.8717	.8708	.8703	.8699	.8689
.0030	.8548	.8540	.8532	.8523	.8518	.8514	.8505	.8495	.8485	.8479	.8475	.8463
.0040	.8379	.8370	.8361	.8352	.8346	.8342	.8332	.8322	.8311	.8304	.8300	.8288
.0050	.8239	.8230	.8221	.8211	.8205	.8201	.8190	.8179	.8167	.8161	.8156	.8143
.0060	.8120	.8110	.8100	.8090	.8084	.8079	.8068	.8057	.8045	.8038	.8033	.8020
.0070	.8015	.8004	.7995	.7984	.7978	.7973	.7962	.7950	.7937	.7931	.7925	.7912
.0080	.7922	.7911	.7901	.7890	.7884	.7879	.7867	.7855	.7842	.7835	.7830	.7816
.0090	.7837	.7826	.7816	.7805	.7799	.7794	.7782	.7769	.7756	.7749	.7744	.7729
.0100	.7761	.7749	.7739	.7728	.7721	.7716	.7704	.7692	.7678	.7671	.7666	.7651
.0200	.7229	.7217	.7206	.7194	.7187	.7182	.7169	.7155	.7141	.7133	.7128	.7111
.0300	.6905	.6892	.6881	.6869	.6862	.6857	.6844	.6830	.6815	.6808	.6802	.6786
.0400	.6674	.6660	.6650	.6638	.6630	.6625	.6612	.6598	.6583	.6577	.6571	.6554
.0500	.6495	.6482	.6471	.6460	.6452	.6447	.6434	.6420	.6406	.6399	.6393	.6377
.0600	.6351	.6337	.6327	.6316	.6308	.6303	.6291	.6277	.6262	.6256	.6250	.6234
.0700	.6230	.6217	.6207	.6196	.6188	.6184	.6171	.6157	.6143	.6137	.6131	.6115
.0800	.6128	.6114	.6104	.6093	.6086	.6081	.6069	.6055	.6041	.6035	.6030	.6014
.0900	.6038	.6025	.6015	.6004	.5997	.5993	.5980	.5967	.5953	.5947	.5942	.5926
.1000	.5959	.5946	.5937	.5926	.5919	.5914	.5902	.5889	.5875	.5870	.5865	.5849

TABLE 124. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 3$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9650	.9647	.9644	.9640	.9637	.9633	.9629	.9625	.9621	.9617	.9612
.0002	.9516	.9512	.9507	.9502	.9498	.9493	.9487	.9482	.9476	.9471	.9465
.0003	.9417	.9412	.9406	.9401	.9395	.9389	.9383	.9377	.9370	.9363	.9356
.0004	.9336	.9330	.9324	.9318	.9311	.9304	.9298	.9290	.9283	.9276	.9268
.0005	.9266	.9260	.9253	.9246	.9239	.9232	.9225	.9217	.9209	.9200	.9192
.0006	.9204	.9198	.9190	.9183	.9176	.9168	.9160	.9152	.9143	.9134	.9125
.0007	.9149	.9142	.9134	.9126	.9118	.9110	.9102	.9093	.9084	.9074	.9065
.0008	.9098	.9091	.9083	.9074	.9066	.9057	.9049	.9039	.9030	.9020	.9010
.0009	.9051	.9043	.9035	.9027	.9018	.9009	.9000	.8990	.8980	.8970	.8959
.0010	.9008	.9000	.8991	.8982	.8973	.8964	.8954	.8944	.8934	.8923	.8912
.0020	.8679	.8669	.8658	.8647	.8636	.8624	.8613	.8600	.8587	.8574	.8560
.0030	.8453	.8441	.8429	.8416	.8404	.8391	.8378	.8364	.8349	.8335	.8320
.0040	.8276	.8264	.8250	.8237	.8224	.8210	.8196	.8181	.8165	.8150	.8134
.0050	.8131	.8118	.8104	.8090	.8076	.8061	.8047	.8031	.8015	.7999	.7982
.0060	.8007	.7994	.7979	.7965	.7950	.7935	.7920	.7903	.7886	.7870	.7853
.0070	.7899	.7885	.7870	.7855	.7840	.7824	.7809	.7792	.7775	.7758	.7740
.0080	.7803	.7789	.7773	.7758	.7743	.7727	.7711	.7694	.7676	.7659	.7641
.0090	.7716	.7702	.7686	.7671	.7655	.7639	.7623	.7606	.7587	.7570	.7552
.0100	.7638	.7623	.7607	.7591	.7575	.7559	.7544	.7526	.7507	.7490	.7471
.0200	.7097	.7082	.7065	.7048	.7031	.7014	.6998	.6979	.6959	.6941	.6922
.0300	.6772	.6756	.6738	.6722	.6705	.6687	.6672	.6653	.6633	.6615	.6596
.0400	.6541	.6526	.6507	.6491	.6474	.6457	.6442	.6423	.6403	.6386	.6367
.0500	.6364	.6349	.6331	.6315	.6298	.6281	.6267	.6248	.6228	.6211	.6193
.0600	.6221	.6207	.6188	.6173	.6156	.6140	.6126	.6107	.6087	.6071	.6053
.0700	.6102	.6088	.6070	.6055	.6039	.6022	.6009	.5990	.5971	.5956	.5938
.0800	.6002	.5988	.5970	.5955	.5939	.5923	.5910	.5891	.5872	.5857	.5840
.0900	.5914	.5900	.5883	.5868	.5852	.5836	.5824	.5806	.5787	.5772	.5755
.1000	.5837	.5824	.5806	.5792	.5776	.5760	.5749	.5731	.5712	.5698	.5681

TABLE 125. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9576	.9573	.9570	.9567	.9565	.9564	.9561	.9557	.9554	.9551	.9550	.9546
.0002	.9416	.9412	.9408	.9404	.9401	.9400	.9395	.9391	.9386	.9383	.9381	.9375
.0003	.9298	.9294	.9289	.9284	.9282	.9279	.9274	.9269	.9263	.9260	.9257	.9251
.0004	.9203	.9198	.9193	.9187	.9184	.9182	.9176	.9170	.9163	.9160	.9157	.9150
.0005	.9121	.9116	.9110	.9105	.9101	.9098	.9092	.9085	.9079	.9074	.9071	.9064
.0006	.9050	.9044	.9038	.9032	.9028	.9025	.9018	.9011	.9004	.8999	.8996	.8988
.0007	.8985	.8979	.8973	.8966	.8962	.8959	.8952	.8945	.8937	.8932	.8929	.8920
.0008	.8927	.8920	.8914	.8907	.8902	.8899	.8892	.8884	.8876	.8871	.8868	.8859
.0009	.8873	.8866	.8859	.8852	.8848	.8844	.8837	.8829	.8820	.8815	.8812	.8802
.0010	.8823	.8815	.8808	.8801	.8797	.8793	.8785	.8777	.8768	.8763	.8759	.8750
.0020	.8450	.8441	.8433	.8424	.8418	.8414	.8405	.8394	.8383	.8377	.8373	.8361
.0030	.8198	.8188	.8179	.8169	.8163	.8158	.8148	.8136	.8124	.8118	.8113	.8100
.0040	.8004	.7994	.7984	.7973	.7967	.7962	.7951	.7939	.7926	.7919	.7914	.7900
.0050	.7846	.7835	.7825	.7814	.7808	.7803	.7791	.7779	.7765	.7758	.7753	.7739
.0060	.7713	.7702	.7691	.7680	.7673	.7668	.7656	.7643	.7630	.7623	.7617	.7602
.0070	.7598	.7586	.7575	.7564	.7557	.7552	.7540	.7526	.7513	.7505	.7500	.7485
.0080	.7496	.7484	.7473	.7462	.7454	.7449	.7437	.7423	.7409	.7402	.7397	.7381
.0090	.7405	.7392	.7382	.7370	.7363	.7358	.7345	.7332	.7317	.7310	.7304	.7289
.0100	.7322	.7310	.7299	.7287	.7280	.7275	.7262	.7249	.7234	.7227	.7221	.7205
.0200	.6768	.6755	.6745	.6733	.6725	.6720	.6707	.6693	.6678	.6671	.6665	.6649
.0300	.6444	.6430	.6420	.6408	.6401	.6396	.6383	.6369	.6355	.6348	.6343	.6326
.0400	.6218	.6205	.6195	.6183	.6176	.6171	.6159	.6145	.6131	.6125	.6119	.6103
.0500	.6048	.6034	.6025	.6013	.6006	.6002	.5990	.5976	.5962	.5957	.5951	.5935
.0600	.5912	.5898	.5889	.5878	.5871	.5867	.5855	.5842	.5828	.5823	.5818	.5802
.0700	.5799	.5786	.5777	.5767	.5760	.5756	.5744	.5731	.5718	.5713	.5708	.5692
.0800	.5705	.5691	.5683	.5673	.5666	.5662	.5651	.5638	.5625	.5620	.5615	.5600
.0900	.5623	.5610	.5602	.5592	.5585	.5581	.5570	.5558	.5545	.5541	.5536	.5521
.1000	.5551	.5538	.5531	.5521	.5514	.5511	.5500	.5488	.5475	.5471	.5466	.5451

TABLE 125. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 4$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9542	.9538	.9533	.9529	.9524	.9520	.9515	.9509	.9504	.9499	.9493
.0002	.9370	.9365	.9359	.9353	.9347	.9340	.9334	.9327	.9320	.9313	.9305
.0003	.9245	.9238	.9231	.9224	.9217	.9210	.9202	.9194	.9186	.9177	.9169
.0004	.9143	.9136	.9128	.9120	.9112	.9104	.9096	.9087	.9077	.9068	.9058
.0005	.9056	.9048	.9040	.9032	.9023	.9014	.9005	.8995	.8985	.8975	.8965
.0006	.8980	.8972	.8963	.8954	.8945	.8935	.8926	.8915	.8904	.8894	.8882
.0007	.8912	.8903	.8894	.8884	.8875	.8865	.8854	.8844	.8832	.8821	.8809
.0008	.8850	.8841	.8831	.8821	.8811	.8800	.8790	.8779	.8767	.8755	.8743
.0009	.8793	.8783	.8773	.8763	.8752	.8742	.8731	.8719	.8707	.8695	.8682
.0010	.8740	.8730	.8720	.8709	.8698	.8687	.8676	.8664	.8651	.8639	.8625
.0020	.8350	.8338	.8325	.8312	.8299	.8285	.8272	.8257	.8242	.8227	.8211
.0030	.8088	.8074	.8060	.8046	.8032	.8017	.8003	.7986	.7970	.7954	.7936
.0040	.7888	.7874	.7859	.7844	.7829	.7813	.7798	.7781	.7763	.7747	.7729
.0050	.7725	.7711	.7695	.7680	.7664	.7648	.7633	.7615	.7597	.7580	.7561
.0060	.7589	.7574	.7558	.7542	.7526	.7510	.7494	.7476	.7457	.7440	.7421
.0070	.7471	.7456	.7439	.7424	.7407	.7390	.7375	.7356	.7337	.7319	.7300
.0080	.7367	.7352	.7335	.7319	.7303	.7286	.7270	.7251	.7232	.7214	.7195
.0090	.7275	.7260	.7242	.7226	.7210	.7192	.7176	.7158	.7138	.7120	.7101
.0100	.7191	.7176	.7159	.7142	.7126	.7108	.7092	.7073	.7054	.7036	.7016
.0200	.6635	.6620	.6602	.6585	.6568	.6551	.6536	.6517	.6497	.6479	.6460
.0300	.6313	.6298	.6280	.6264	.6248	.6231	.6217	.6197	.6178	.6161	.6143
.0400	.6090	.6076	.6058	.6043	.6027	.6010	.5997	.5979	.5959	.5944	.5926
.0500	.5923	.5910	.5892	.5877	.5861	.5845	.5833	.5815	.5796	.5781	.5764
.0600	.5790	.5777	.5760	.5745	.5730	.5715	.5703	.5685	.5667	.5653	.5636
.0700	.5681	.5669	.5651	.5637	.5623	.5608	.5596	.5579	.5561	.5548	.5532
.0800	.5589	.5577	.5560	.5547	.5532	.5517	.5507	.5490	.5472	.5459	.5444
.0900	.5510	.5498	.5482	.5468	.5454	.5440	.5430	.5413	.5396	.5383	.5368
.1000	.5441	.5430	.5413	.5400	.5386	.5372	.5363	.5346	.5329	.5317	.5303

TABLE 126. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*
(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9384	.9380	.9376	.9371	.9369	.9367	.9362	.9357	.9352	.9349	.9347	.9341
.0002	.9161	.9155	.9150	.9145	.9141	.9139	.9133	.9126	.9119	.9116	.9113	.9105
.0003	.9001	.8995	.8988	.8982	.8978	.8975	.8968	.8961	.8953	.8948	.8945	.8937
.0004	.8873	.8866	.8859	.8852	.8848	.8844	.8837	.8829	.8820	.8815	.8812	.8802
.0005	.8765	.8757	.8750	.8742	.8738	.8734	.8726	.8717	.8708	.8703	.8699	.8689
.0006	.8670	.8663	.8655	.8647	.8642	.8638	.8630	.8620	.8611	.8605	.8601	.8591
.0007	.8587	.8579	.8571	.8562	.8557	.8553	.8544	.8535	.8525	.8519	.8515	.8504
.0008	.8511	.8503	.8495	.8486	.8481	.8477	.8467	.8457	.8447	.8441	.8436	.8425
.0009	.8443	.8434	.8425	.8416	.8411	.8407	.8397	.8387	.8376	.8370	.8365	.8354
.0010	.8379	.8370	.8361	.8352	.8346	.8342	.8332	.8322	.8311	.8304	.8300	.8288
.0020	.7922	.7911	.7901	.7890	.7884	.7879	.7867	.7855	.7842	.7835	.7830	.7816
.0030	.7625	.7613	.7603	.7592	.7585	.7580	.7567	.7554	.7541	.7533	.7528	.7513
.0040	.7405	.7392	.7382	.7370	.7363	.7358	.7345	.7332	.7317	.7310	.7304	.7289
.0050	.7229	.7217	.7206	.7194	.7187	.7182	.7169	.7155	.7141	.7133	.7128	.7111
.0060	.7084	.7071	.7061	.7049	.7041	.7036	.7023	.7009	.6994	.6987	.6982	.6965
.0070	.6961	.6948	.6937	.6925	.6917	.6912	.6899	.6885	.6870	.6863	.6858	.6841
.0080	.6853	.6840	.6829	.6817	.6810	.6805	.6792	.6778	.6763	.6756	.6750	.6734
.0090	.6758	.6745	.6735	.6723	.6715	.6710	.6697	.6683	.6668	.6661	.6655	.6639
.0100	.6674	.6660	.6650	.6638	.6630	.6625	.6612	.6598	.6583	.6577	.6571	.6554
.0200	.6128	.6114	.6104	.6093	.6086	.6081	.6069	.6055	.6041	.6035	.6030	.6014
.0300	.5826	.5812	.5803	.5793	.5786	.5782	.5770	.5757	.5743	.5739	.5734	.5718
.0400	.5623	.5610	.5602	.5592	.5585	.5581	.5570	.5558	.5545	.5541	.5536	.5521
.0500	.5473	.5461	.5453	.5444	.5437	.5434	.5423	.5411	.5398	.5395	.5390	.5376
.0600	.5357	.5344	.5337	.5328	.5322	.5318	.5308	.5297	.5284	.5281	.5277	.5263
.0700	.5262	.5249	.5243	.5234	.5228	.5225	.5215	.5204	.5192	.5189	.5185	.5171
.0800	.5182	.5170	.5164	.5156	.5150	.5147	.5138	.5126	.5115	.5113	.5109	.5095
.0900	.5115	.5103	.5097	.5089	.5083	.5080	.5071	.5061	.5049	.5047	.5043	.5030
.1000	.5056	.5044	.5039	.5031	.5026	.5023	.5014	.5004	.4993	.4991	.4987	.4974

TABLE 126. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 6$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9336	.9330	.9324	.9318	.9311	.9304	.9298	.9290	.9283	.9276	.9268
.0002	.9098	.9091	.9083	.9074	.9066	.9057	.9049	.9039	.9030	.9020	.9010
.0003	.8929	.8920	.8910	.8901	.8891	.8882	.8872	.8861	.8850	.8839	.8827
.0004	.8793	.8783	.8773	.8763	.8752	.8742	.8731	.8719	.8707	.8695	.8682
.0005	.8679	.8669	.8658	.8647	.8636	.8624	.8613	.8600	.8587	.8574	.8560
.0006	.8581	.8570	.8558	.8547	.8535	.8522	.8510	.8497	.8483	.8470	.8455
.0007	.8493	.8482	.8469	.8457	.8445	.8432	.8420	.8406	.8391	.8377	.8362
.0008	.8414	.8402	.8390	.8377	.8364	.8351	.8338	.8324	.8309	.8294	.8279
.0009	.8342	.8330	.8317	.8304	.8291	.8277	.8264	.8249	.8234	.8219	.8203
.0010	.8276	.8264	.8250	.8237	.8224	.8210	.8196	.8181	.8165	.8150	.8134
.0020	.7803	.7789	.7773	.7758	.7743	.7727	.7711	.7694	.7676	.7659	.7641
.0030	.7499	.7484	.7468	.7452	.7435	.7419	.7403	.7385	.7366	.7348	.7329
.0040	.7275	.7260	.7242	.7226	.7210	.7192	.7176	.7158	.7138	.7120	.7101
.0050	.7097	.7082	.7065	.7048	.7031	.7014	.6998	.6979	.6959	.6941	.6922
.0060	.6951	.6936	.6918	.6902	.6885	.6867	.6851	.6832	.6812	.6794	.6775
.0070	.6827	.6812	.6794	.6777	.6760	.6743	.6727	.6708	.6688	.6670	.6651
.0080	.6720	.6704	.6686	.6670	.6653	.6635	.6620	.6601	.6581	.6563	.6544
.0090	.6625	.6610	.6592	.6575	.6558	.6541	.6526	.6507	.6487	.6469	.6450
.0100	.6541	.6526	.6507	.6491	.6474	.6457	.6442	.6423	.6403	.6386	.6367
.0200	.6002	.5988	.5970	.5955	.5939	.5923	.5910	.5891	.5872	.5857	.5840
.0300	.5707	.5694	.5677	.5663	.5648	.5633	.5621	.5604	.5586	.5572	.5556
.0400	.5510	.5498	.5482	.5468	.5454	.5440	.5430	.5413	.5396	.5383	.5368
.0500	.5366	.5355	.5338	.5326	.5313	.5299	.5290	.5274	.5257	.5246	.5231
.0600	.5254	.5243	.5227	.5215	.5202	.5189	.5181	.5166	.5149	.5139	.5125
.0700	.5163	.5153	.5137	.5126	.5113	.5101	.5093	.5078	.5062	.5052	.5040
.0800	.5087	.5077	.5062	.5051	.5039	.5027	.5020	.5006	.4990	.4981	.4969
.0900	.5023	.5013	.4998	.4988	.4976	.4964	.4958	.4944	.4929	.4920	.4908
.1000	.4967	.4958	.4943	.4933	.4922	.4910	.4904	.4890	.4876	.4867	.4856

TABLE 127. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*
(Electrolyte, $z_+z_-=8$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9203	.9198	.9193	.9187	.9184	.9182	.9176	.9170	.9163	.9160	.9157	.9150
.0002	.8927	.8920	.8914	.8907	.8902	.8899	.8892	.8884	.8876	.8871	.8868	.8859
.0003	.8732	.8724	.8717	.8709	.8704	.8701	.8692	.8684	.8674	.8669	.8665	.8655
.0004	.8578	.8570	.8562	.8553	.8548	.8545	.8535	.8526	.8516	.8510	.8506	.8494
.0005	.8450	.8441	.8433	.8424	.8418	.8414	.8405	.8394	.8383	.8377	.8373	.8361
.0006	.8340	.8330	.8322	.8312	.8306	.8302	.8292	.8281	.8270	.8264	.8259	.8247
.0007	.8242	.8233	.8224	.8214	.8208	.8204	.8193	.8182	.8170	.8164	.8159	.8146
.0008	.8155	.8145	.8136	.8126	.8120	.8115	.8104	.8093	.8081	.8074	.8069	.8056
.0009	.8076	.8066	.8056	.8046	.8040	.8035	.8024	.8012	.8000	.7993	.7988	.7975
.0010	.8004	.7994	.7984	.7973	.7967	.7962	.7951	.7939	.7926	.7919	.7914	.7900
.0020	.7496	.7484	.7473	.7462	.7454	.7449	.7437	.7423	.7409	.7402	.7397	.7381
.0030	.7178	.7166	.7155	.7143	.7135	.7130	.7117	.7103	.7089	.7082	.7076	.7060
.0040	.6948	.6935	.6924	.6912	.6905	.6900	.6887	.6872	.6858	.6851	.6845	.6828
.0050	.6768	.6755	.6745	.6733	.6725	.6720	.6707	.6693	.6678	.6671	.6665	.6649
.0060	.6622	.6609	.6598	.6586	.6579	.6574	.6561	.6546	.6532	.6525	.6519	.6503
.0070	.6499	.6485	.6475	.6463	.6456	.6451	.6438	.6424	.6409	.6403	.6397	.6380
.0080	.6393	.6379	.6369	.6357	.6350	.6345	.6333	.6318	.6304	.6298	.6292	.6275
.0090	.6300	.6287	.6277	.6265	.6258	.6253	.6240	.6227	.6212	.6206	.6200	.6184
.0100	.6218	.6205	.6195	.6183	.6176	.6171	.6159	.6145	.6131	.6125	.6119	.6103
.0200	.5705	.5691	.5683	.5673	.5666	.5662	.5651	.5638	.5625	.5620	.5615	.5600
.0300	.5431	.5419	.5411	.5402	.5396	.5392	.5382	.5370	.5357	.5354	.5350	.5335
.0400	.5252	.5240	.5233	.5225	.5219	.5215	.5206	.5195	.5183	.5180	.5176	.5162
.0500	.5122	.5110	.5104	.5096	.5090	.5087	.5078	.5067	.5056	.5054	.5050	.5037
.0600	.5021	.5010	.5004	.4996	.4991	.4988	.4980	.4969	.4959	.4957	.4953	.4940
.0700	.4941	.4929	.4924	.4917	.4911	.4909	.4901	.4891	.4880	.4879	.4876	.4863
.0800	.4874	.4862	.4857	.4851	.4846	.4843	.4835	.4826	.4816	.4815	.4811	.4799
.0900	.4817	.4805	.4801	.4795	.4790	.4788	.4780	.4771	.4761	.4760	.4757	.4745
.1000	.4768	.4757	.4753	.4746	.4742	.4740	.4732	.4723	.4713	.4713	.4710	.4698

TABLE 127. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*—Continued

(Electrolyte, $z_+z_- = 8$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9143	.9136	.9128	.9120	.9112	.9104	.9096	.9087	.9077	.9068	.9058
.0002	.8850	.8841	.8831	.8821	.8811	.8800	.8790	.8779	.8767	.8755	.8743
.0003	.8645	.8634	.8623	.8612	.8601	.8589	.8577	.8564	.8551	.8538	.8524
.0004	.8484	.8472	.8460	.8448	.8436	.8423	.8410	.8396	.8382	.8368	.8353
.0005	.8350	.8338	.8325	.8312	.8299	.8285	.8272	.8257	.8242	.8227	.8211
.0006	.8235	.8222	.8209	.8196	.8182	.8168	.8154	.8138	.8122	.8107	.8091
.0007	.8134	.8121	.8107	.8093	.8079	.8064	.8050	.8034	.8018	.8002	.7985
.0008	.8044	.8030	.8016	.8002	.7987	.7972	.7958	.7941	.7924	.7908	.7891
.0009	.7962	.7948	.7934	.7919	.7904	.7889	.7874	.7857	.7840	.7824	.7806
.0010	.7888	.7874	.7859	.7844	.7829	.7813	.7798	.7781	.7763	.7747	.7729
.0020	.7367	.7352	.7335	.7319	.7303	.7286	.7270	.7251	.7232	.7214	.7195
.0030	.7046	.7030	.7013	.6996	.6979	.6962	.6946	.6927	.6907	.6889	.6870
.0040	.6814	.6799	.6781	.6765	.6748	.6730	.6715	.6695	.6675	.6658	.6638
.0050	.6635	.6620	.6602	.6585	.6568	.6551	.6536	.6517	.6497	.6479	.6460
.0060	.6489	.6474	.6456	.6440	.6423	.6406	.6391	.6372	.6352	.6335	.6316
.0070	.6367	.6352	.6334	.6318	.6302	.6284	.6270	.6251	.6231	.6215	.6196
.0080	.6262	.6248	.6230	.6214	.6198	.6181	.6167	.6148	.6128	.6112	.6094
.0090	.6171	.6157	.6139	.6123	.6107	.6090	.6077	.6058	.6038	.6023	.6005
.0100	.6090	.6076	.6058	.6043	.6027	.6010	.5997	.5979	.5959	.5944	.5926
.0200	.5589	.5577	.5560	.5547	.5532	.5517	.5507	.5490	.5472	.5459	.5444
.0300	.5326	.5315	.5298	.5286	.5273	.5259	.5251	.5235	.5218	.5207	.5193
.0400	.5154	.5144	.5128	.5117	.5104	.5092	.5084	.5070	.5054	.5044	.5031
.0500	.5029	.5020	.5005	.4994	.4983	.4971	.4964	.4950	.4935	.4926	.4914
.0600	.4933	.4925	.4910	.4900	.4889	.4878	.4872	.4859	.4844	.4836	.4825
.0700	.4857	.4849	.4834	.4825	.4814	.4803	.4799	.4785	.4771	.4764	.4753
.0800	.4793	.4785	.4771	.4762	.4752	.4742	.4738	.4725	.4711	.4704	.4694
.0900	.4739	.4732	.4718	.4709	.4700	.4690	.4686	.4674	.4660	.4654	.4644
.1000	.4693	.4686	.4672	.4664	.4655	.4645	.4642	.4630	.4617	.4611	.4601

TABLE 128. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*
(Electrolyte, $z_+z_-=9$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.9117	.9111	.9106	.9100	.9096	.9094	.9087	.9081	.9074	.9069	.9067	.9059
.0002	.8817	.8809	.8802	.8795	.8790	.8787	.8779	.8771	.8762	.8757	.8753	.8743
.0003	.8607	.8599	.8591	.8583	.8577	.8574	.8565	.8555	.8545	.8539	.8535	.8524
.0004	.8443	.8434	.8425	.8416	.8411	.8407	.8397	.8387	.8376	.8370	.8365	.8354
.0005	.8306	.8297	.8288	.8279	.8273	.8268	.8258	.8247	.8236	.8229	.8225	.8212
.0006	.8189	.8180	.8170	.8160	.8154	.8150	.8139	.8128	.8116	.8109	.8104	.8091
.0007	.8087	.8077	.8067	.8057	.8051	.8046	.8035	.8023	.8011	.8004	.7999	.7986
.0008	.7995	.7985	.7975	.7965	.7958	.7954	.7942	.7930	.7918	.7911	.7905	.7892
.0009	.7913	.7902	.7892	.7881	.7875	.7870	.7858	.7846	.7833	.7826	.7821	.7807
.0010	.7837	.7826	.7816	.7805	.7799	.7794	.7782	.7769	.7756	.7749	.7744	.7729
.0020	.7313	.7300	.7289	.7278	.7270	.7265	.7252	.7239	.7224	.7217	.7211	.7195
.0030	.6990	.6977	.6966	.6954	.6947	.6942	.6929	.6914	.6900	.6893	.6887	.6870
.0040	.6758	.6745	.6735	.6723	.6715	.6710	.6697	.6683	.6668	.6661	.6655	.6639
.0050	.6579	.6566	.6555	.6544	.6536	.6531	.6518	.6504	.6489	.6483	.6477	.6460
.0060	.6434	.6421	.6410	.6399	.6391	.6386	.6374	.6359	.6345	.6338	.6333	.6316
.0070	.6313	.6299	.6289	.6277	.6270	.6265	.6253	.6239	.6224	.6218	.6213	.6196
.0080	.6209	.6195	.6185	.6174	.6167	.6162	.6149	.6136	.6121	.6115	.6110	.6094
.0090	.6118	.6105	.6095	.6084	.6076	.6072	.6060	.6046	.6032	.6026	.6021	.6005
.0100	.6038	.6025	.6015	.6004	.5997	.5993	.5980	.5967	.5953	.5947	.5942	.5926
.0200	.5543	.5530	.5522	.5513	.5506	.5502	.5492	.5479	.5466	.5463	.5458	.5443
.0300	.5284	.5271	.5264	.5256	.5250	.5247	.5237	.5225	.5213	.5211	.5206	.5192
.0400	.5115	.5103	.5097	.5089	.5083	.5080	.5071	.5061	.5049	.5047	.5043	.5030
.0500	.4993	.4981	.4976	.4968	.4963	.4961	.4952	.4942	.4931	.4930	.4926	.4913
.0600	.4899	.4888	.4883	.4876	.4871	.4869	.4861	.4851	.4840	.4839	.4836	.4824
.0700	.4824	.4813	.4808	.4802	.4797	.4795	.4787	.4778	.4768	.4767	.4764	.4752
.0800	.4762	.4751	.4747	.4741	.4736	.4734	.4727	.4718	.4708	.4708	.4705	.4693
.0900	.4710	.4699	.4695	.4689	.4684	.4683	.4676	.4667	.4657	.4657	.4654	.4643
.1000	.4664	.4654	.4650	.4644	.4640	.4638	.4632	.4623	.4614	.4614	.4611	.4600

TABLE 128. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 9$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.9051	.9043	.9035	.9027	.9018	.9009	.9000	.8990	.8980	.8970	.8959
.0002	.8734	.8724	.8713	.8703	.8692	.8681	.8669	.8657	.8644	.8632	.8619
.0003	.8514	.8503	.8491	.8479	.8467	.8454	.8441	.8428	.8413	.8399	.8385
.0004	.8342	.8330	.8317	.8304	.8291	.8277	.8264	.8249	.8234	.8219	.8203
.0005	.8200	.8188	.8174	.8161	.8147	.8132	.8118	.8103	.8087	.8071	.8054
.0006	.8079	.8066	.8052	.8038	.8023	.8008	.7994	.7978	.7961	.7945	.7928
.0007	.7973	.7959	.7945	.7930	.7915	.7900	.7885	.7869	.7851	.7835	.7817
.0008	.7879	.7865	.7850	.7835	.7820	.7804	.7789	.7772	.7754	.7737	.7719
.0009	.7794	.7779	.7764	.7749	.7733	.7717	.7702	.7685	.7667	.7650	.7631
.0010	.7716	.7702	.7686	.7671	.7655	.7639	.7623	.7606	.7587	.7570	.7552
.0020	.7181	.7166	.7149	.7133	.7116	.7098	.7083	.7063	.7044	.7026	.7006
.0030	.6856	.6841	.6823	.6807	.6790	.6772	.6757	.6737	.6717	.6700	.6680
.0040	.6625	.6610	.6592	.6575	.6558	.6541	.6526	.6507	.6487	.6469	.6450
.0050	.6447	.6432	.6414	.6398	.6381	.6364	.6349	.6330	.6310	.6293	.6274
.0060	.6303	.6288	.6270	.6255	.6238	.6221	.6207	.6188	.6168	.6152	.6133
.0070	.6183	.6169	.6151	.6135	.6119	.6102	.6089	.6070	.6050	.6034	.6016
.0080	.6081	.6067	.6049	.6034	.6018	.6001	.5988	.5969	.5950	.5935	.5917
.0090	.5992	.5978	.5961	.5946	.5930	.5913	.5901	.5882	.5863	.5848	.5831
.0100	.5914	.5900	.5883	.5868	.5852	.5836	.5824	.5806	.5787	.5772	.5755
.0200	.5433	.5422	.5405	.5392	.5379	.5365	.5355	.5339	.5322	.5310	.5295
.0300	.5184	.5174	.5158	.5146	.5134	.5121	.5114	.5099	.5083	.5072	.5060
.0400	.5023	.5013	.4998	.4988	.4976	.4964	.4958	.4944	.4929	.4920	.4908
.0500	.4906	.4898	.4883	.4874	.4863	.4852	.4846	.4833	.4819	.4811	.4800
.0600	.4818	.4810	.4795	.4786	.4776	.4766	.4761	.4748	.4734	.4727	.4717
.0700	.4746	.4739	.4725	.4716	.4707	.4697	.4693	.4680	.4667	.4660	.4651
.0800	.4688	.4681	.4667	.4659	.4650	.4640	.4637	.4625	.4612	.4606	.4597
.0900	.4638	.4632	.4618	.4610	.4601	.4592	.4589	.4577	.4565	.4559	.4551
.1000	.4595	.4589	.4576	.4569	.4560	.4551	.4548	.4537	.4525	.4520	.4511

TABLE 129. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8873	.8866	.8859	.8852	.8848	.8844	.8837	.8829	.8820	.8815	.8812	.8802
.0002	.8511	.8503	.8495	.8486	.8481	.8477	.8467	.8457	.8447	.8441	.8436	.8425
.0003	.8266	.8256	.8247	.8237	.8231	.8227	.8217	.8206	.8194	.8187	.8183	.8170
.0004	.8076	.8066	.8056	.8046	.8040	.8035	.8024	.8012	.8000	.7993	.7988	.7975
.0005	.7922	.7911	.7901	.7890	.7884	.7879	.7867	.7855	.7842	.7835	.7830	.7816
.0006	.7791	.7779	.7769	.7758	.7751	.7747	.7735	.7722	.7709	.7702	.7696	.7682
.0007	.7677	.7665	.7655	.7644	.7637	.7632	.7620	.7607	.7593	.7586	.7580	.7565
.0008	.7576	.7564	.7554	.7543	.7535	.7530	.7518	.7505	.7491	.7484	.7478	.7463
.0009	.7486	.7474	.7464	.7452	.7445	.7440	.7427	.7414	.7400	.7393	.7387	.7371
.0010	.7405	.7392	.7382	.7370	.7363	.7358	.7345	.7332	.7317	.7310	.7304	.7289
.0020	.6853	.6840	.6829	.6817	.6810	.6805	.6792	.6778	.6763	.6756	.6750	.6734
.0030	.6528	.6514	.6504	.6492	.6485	.6480	.6467	.6453	.6438	.6431	.6426	.6409
.0040	.6300	.6287	.6277	.6265	.6258	.6253	.6240	.6227	.6212	.6206	.6200	.6184
.0050	.6128	.6114	.6104	.6093	.6086	.6081	.6069	.6055	.6041	.6035	.6030	.6014
.0060	.5990	.5976	.5967	.5956	.5949	.5944	.5932	.5919	.5905	.5900	.5894	.5878
.0070	.5876	.5862	.5853	.5843	.5836	.5831	.5820	.5807	.5793	.5788	.5783	.5767
.0080	.5779	.5766	.5757	.5747	.5740	.5736	.5724	.5711	.5698	.5693	.5688	.5673
.0090	.5696	.5683	.5674	.5664	.5657	.5653	.5642	.5629	.5616	.5612	.5607	.5592
.0100	.5623	.5610	.5602	.5592	.5585	.5581	.5570	.5558	.5545	.5541	.5536	.5521
.0200	.5182	.5170	.5164	.5156	.5150	.5147	.5138	.5126	.5115	.5113	.5109	.5095
.0300	.4959	.4948	.4942	.4935	.4930	.4927	.4919	.4909	.4898	.4897	.4894	.4881
.0400	.4817	.4805	.4801	.4795	.4790	.4788	.4780	.4771	.4761	.4760	.4757	.4745
.0500	.4715	.4704	.4700	.4694	.4690	.4688	.4681	.4672	.4663	.4662	.4659	.4648
.0600	.4638	.4627	.4624	.4618	.4614	.4612	.4605	.4597	.4588	.4588	.4585	.4574
.0700	.4576	.4565	.4562	.4557	.4553	.4552	.4545	.4537	.4529	.4529	.4527	.4516
.0800	.4525	.4515	.4512	.4507	.4503	.4502	.4496	.4488	.4480	.4481	.4478	.4468
.0900	.4483	.4473	.4470	.4465	.4462	.4460	.4455	.4447	.4439	.4440	.4438	.4427
.1000	.4446	.4436	.4434	.4429	.4426	.4425	.4419	.4412	.4404	.4405	.4403	.4393

TABLE 129. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 12$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8793	.8783	.8773	.8763	.8752	.8742	.8731	.8719	.8707	.8695	.8682
.0002	.8414	.8402	.8390	.8377	.8364	.8351	.8338	.8324	.8309	.8294	.8279
.0003	.8158	.8145	.8131	.8118	.8103	.8089	.8075	.8059	.8043	.8027	.8010
.0004	.7962	.7948	.7934	.7919	.7904	.7889	.7874	.7857	.7840	.7824	.7806
.0005	.7803	.7789	.7773	.7758	.7743	.7727	.7711	.7694	.7676	.7659	.7641
.0006	.7668	.7654	.7638	.7622	.7606	.7590	.7575	.7557	.7538	.7521	.7502
.0007	.7552	.7537	.7521	.7505	.7489	.7472	.7456	.7438	.7419	.7402	.7383
.0008	.7449	.7434	.7418	.7402	.7385	.7368	.7353	.7334	.7315	.7297	.7278
.0009	.7357	.7342	.7325	.7310	.7293	.7276	.7260	.7241	.7222	.7204	.7185
.0010	.7275	.7260	.7242	.7226	.7210	.7192	.7176	.7158	.7138	.7120	.7101
.0020	.6720	.6704	.6686	.6670	.6653	.6635	.6620	.6601	.6581	.6563	.6544
.0030	.6396	.6381	.6363	.6347	.6330	.6313	.6299	.6279	.6260	.6243	.6224
.0040	.6171	.6157	.6139	.6123	.6107	.6090	.6077	.6058	.6038	.6023	.6005
.0050	.6002	.5988	.5970	.5955	.5939	.5923	.5910	.5891	.5872	.5857	.5840
.0060	.5867	.5853	.5836	.5821	.5806	.5790	.5778	.5760	.5741	.5726	.5710
.0070	.5756	.5743	.5725	.5711	.5696	.5680	.5669	.5651	.5633	.5619	.5603
.0080	.5662	.5649	.5632	.5618	.5603	.5588	.5577	.5560	.5542	.5529	.5513
.0090	.5581	.5569	.5552	.5538	.5524	.5509	.5499	.5482	.5464	.5451	.5436
.0100	.5510	.5498	.5482	.5468	.5454	.5440	.5430	.5413	.5396	.5383	.5368
.0200	.5087	.5077	.5062	.5051	.5039	.5027	.5020	.5006	.4990	.4981	.4969
.0300	.4874	.4866	.4852	.4842	.4832	.4821	.4816	.4802	.4788	.4780	.4770
.0400	.4739	.4732	.4718	.4709	.4700	.4690	.4686	.4674	.4660	.4654	.4644
.0500	.4643	.4637	.4623	.4615	.4606	.4597	.4594	.4582	.4570	.4564	.4555
.0600	.4570	.4564	.4551	.4544	.4535	.4527	.4524	.4513	.4501	.4496	.4488
.0700	.4512	.4507	.4494	.4487	.4479	.4471	.4469	.4458	.4446	.4442	.4435
.0800	.4464	.4459	.4447	.4440	.4433	.4425	.4424	.4413	.4402	.4398	.4391
.0900	.4424	.4420	.4407	.4401	.4394	.4386	.4385	.4375	.4364	.4361	.4354
.1000	.4390	.4386	.4374	.4368	.4361	.4353	.4353	.4343	.4332	.4329	.4323

TABLE 130. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis—Bjerrum*

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius											
	0	5	10	15	18	20	25	30	35	38	40	45
.0001	.8578	.8570	.8562	.8553	.8548	.8545	.8535	.8526	.8516	.8510	.8506	.8494
.0002	.8155	.8145	.8136	.8126	.8120	.8115	.8104	.8093	.8081	.8074	.8069	.8056
.0003	.7876	.7865	.7855	.7844	.7837	.7833	.7821	.7808	.7795	.7788	.7783	.7769
.0004	.7665	.7653	.7643	.7632	.7625	.7620	.7608	.7595	.7581	.7574	.7568	.7553
.0005	.7496	.7484	.7473	.7462	.7454	.7449	.7437	.7423	.7409	.7402	.7397	.7381
.0006	.7354	.7342	.7331	.7320	.7312	.7307	.7294	.7281	.7266	.7259	.7253	.7238
.0007	.7233	.7220	.7210	.7198	.7190	.7185	.7172	.7159	.7144	.7137	.7131	.7115
.0008	.7127	.7114	.7103	.7091	.7084	.7079	.7066	.7052	.7037	.7030	.7024	.7008
.0009	.7033	.7020	.7009	.6997	.6989	.6984	.6971	.6957	.6943	.6935	.6930	.6913
.0010	.6948	.6935	.6924	.6912	.6905	.6900	.6887	.6872	.6858	.6851	.6845	.6828
.0020	.6393	.6379	.6369	.6357	.6350	.6345	.6333	.6318	.6304	.6298	.6292	.6275
.0030	.6076	.6065	.6055	.6044	.6037	.6033	.6020	.6007	.5992	.5987	.5982	.5966
.0040	.5864	.5851	.5842	.5831	.5824	.5820	.5808	.5795	.5781	.5777	.5771	.5756
.0050	.5705	.5691	.5683	.5673	.5666	.5662	.5651	.5638	.5625	.5620	.5615	.5600
.0060	.5579	.5566	.5558	.5548	.5542	.5538	.5527	.5515	.5502	.5498	.5493	.5478
.0070	.5476	.5463	.5456	.5446	.5440	.5436	.5426	.5414	.5401	.5398	.5393	.5378
.0080	.5390	.5377	.5370	.5361	.5355	.5351	.5341	.5329	.5317	.5314	.5310	.5295
.0090	.5316	.5304	.5297	.5288	.5282	.5279	.5269	.5257	.5245	.5242	.5238	.5224
.0100	.5252	.5240	.5233	.5225	.5219	.5215	.5206	.5195	.5183	.5180	.5176	.5162
.0200	.4874	.4862	.4857	.4851	.4846	.4843	.4835	.4826	.4816	.4815	.4811	.4799
.0300	.4687	.4676	.4673	.4667	.4662	.4660	.4654	.4645	.4636	.4636	.4633	.4621
.0400	.4570	.4559	.4556	.4551	.4547	.4546	.4539	.4531	.4523	.4523	.4521	.4510
.0500	.4487	.4477	.4474	.4470	.4466	.4465	.4459	.4451	.4443	.4444	.4442	.4431
.0600	.4424	.4415	.4412	.4408	.4405	.4403	.4398	.4391	.4383	.4385	.4382	.4372
.0700	.4375	.4365	.4363	.4359	.4356	.4355	.4350	.4343	.4335	.4337	.4335	.4325
.0800	.4334	.4325	.4323	.4320	.4316	.4315	.4311	.4304	.4297	.4299	.4297	.4287
.0900	.4300	.4291	.4290	.4286	.4283	.4282	.4278	.4271	.4264	.4266	.4264	.4255
.1000	.4271	.4262	.4261	.4258	.4254	.4254	.4250	.4243	.4236	.4239	.4237	.4228

TABLE 130. *Mean activity coefficients of electrolytes in aqueous solutions on a weight basis — Bjerrum* — Continued

(Electrolyte, $z_+z_- = 16$)

Ionic strength	Temperature in degrees Celsius										
	50	55	60	65	70	75	80	85	90	95	100
.0001	.8484	.8472	.8460	.8448	.8436	.8423	.8410	.8396	.8382	.8368	.8353
.0002	.8044	.8030	.8016	.8002	.7987	.7972	.7958	.7941	.7924	.7908	.7891
.0003	.7755	.7741	.7726	.7710	.7695	.7679	.7663	.7646	.7628	.7611	.7592
.0004	.7540	.7525	.7509	.7493	.7477	.7460	.7444	.7426	.7407	.7390	.7371
.0005	.7367	.7352	.7335	.7319	.7303	.7286	.7270	.7251	.7232	.7214	.7195
.0006	.7224	.7208	.7191	.7175	.7158	.7141	.7125	.7106	.7086	.7069	.7049
.0007	.7101	.7086	.7068	.7052	.7035	.7017	.7002	.6983	.6963	.6945	.6925
.0008	.6994	.6979	.6961	.6945	.6928	.6910	.6894	.6875	.6855	.6837	.6818
.0009	.6899	.6884	.6866	.6850	.6833	.6815	.6800	.6780	.6760	.6743	.6723
.0010	.6814	.6799	.6781	.6765	.6748	.6730	.6715	.6695	.6675	.6658	.6638
.0020	.6262	.6248	.6230	.6214	.6198	.6181	.6167	.6148	.6128	.6112	.6094
.0030	.5953	.5940	.5922	.5907	.5891	.5875	.5863	.5844	.5825	.5810	.5793
.0040	.5744	.5731	.5714	.5700	.5685	.5669	.5658	.5640	.5622	.5608	.5592
.0050	.5589	.5577	.5560	.5547	.5532	.5517	.5507	.5490	.5472	.5459	.5444
.0060	.5468	.5456	.5439	.5426	.5413	.5398	.5389	.5372	.5355	.5343	.5328
.0070	.5369	.5358	.5341	.5329	.5315	.5302	.5293	.5277	.5260	.5248	.5234
.0080	.5286	.5275	.5259	.5247	.5234	.5221	.5212	.5197	.5180	.5169	.5156
.0090	.5215	.5205	.5189	.5177	.5165	.5152	.5144	.5129	.5112	.5102	.5089
.0100	.5154	.5144	.5128	.5117	.5104	.5092	.5084	.5070	.5054	.5044	.5031
.0200	.4793	.4785	.4771	.4762	.4752	.4742	.4738	.4725	.4711	.4704	.4694
.0300	.4617	.4610	.4597	.4589	.4581	.4572	.4569	.4557	.4545	.4539	.4531
.0400	.4506	.4501	.4488	.4481	.4473	.4465	.4463	.4453	.4441	.4437	.4429
.0500	.4428	.4424	.4411	.4405	.4398	.4390	.4389	.4379	.4368	.4364	.4358
.0600	.4370	.4365	.4354	.4348	.4341	.4334	.4334	.4324	.4313	.4310	.4304
.0700	.4323	.4319	.4308	.4302	.4296	.4289	.4289	.4280	.4270	.4267	.4262
.0800	.4285	.4282	.4270	.4265	.4259	.4253	.4253	.4244	.4234	.4232	.4227
.0900	.4254	.4250	.4239	.4234	.4228	.4222	.4223	.4214	.4205	.4203	.4198
.1000	.4226	.4223	.4212	.4208	.4202	.4196	.4197	.4189	.4179	.4178	.4173

TABLE 131. *Uncertainties (±) in activity coefficients for solutions having an ionic strength of 0.1 arising from the established limits of error in the physical constants used in the theoretical equations*

(On weight or volume basis)

Uncertainty × 10^5

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			0 °C				
1	10	8_5	8_5	7_9	7_8	7_8	8_3
2	14	13	13	12	12	12	11
3	15	15	15	14	14	14	13
4	14	15	15	15	15	15	13
6	10	13	13	14	14	14	14
8	6_6	10	9_9	11	12	11	14
9	5_2	8_6	8_5	9_7	10	9_9	14
12	2_1	5_1	5_0	6_1	6_4	6_3	15
16	0_8	2_3	2_2	3_0	3_2	3_2	15
			25 °C				
1	10	8_4	8_4	7_9	7_6	7_8	8_1
2	14	13	13	12	12	12	11
3	14	14	14	14	14	14	12
4	13	14	14	14	14	14	13
6	9_3	12	12	14	13	13	14
8	6_0	9_2	9_2	10	11	10	14
9	4_6	7_8	7_8	8_9	9_2	9_2	14
12	2_0	4_5	4_4	5_4	5_8	5_7	14
16	0_6	1_9	1_9	2_6	2_8	2_8	14

TABLE 131. *Uncertainties (±) in activity coefficients for solutions having an ionic strength of 0.1 arising from the established limits of error in the physical constants used in the theoretical equations* — Continued

(On weight or volume basis)

Uncertainty × 10^5

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			50 °C				
1	10	8_2	8_2	7_8	7_6	7_6	7_9
2	13	12	12	12	12	12	11
3	14	14	14	14	14	14	11
4	12	14	14	14	14	14	12
6	8_5	11	11	12	12	12	13
8	5_2	8_3	8_3	9_3	9_6	9_6	13
9	4_0	7_0	7_0	8_0	8_3	8_3	13
12	1_6	3_8	3_8	3_7	5_0	5_0	14
16	0_5	1_6	1_6	1_7	2_3	2_3	14
			75 °C				
1	10	8_2	8_1	7_8	7_5	7_3	7_8
2	13	12	12	12	14	11	10
3	13	13	13	13	13	12	11
4	11	13	13	13	13	12	12
6	7_4	10	10	11	11	11	13
8	4_4	7_4	7_4	8_3	8_6	7_6	13
9	3_3	6_1	6_2	7_0	7_3	6_4	13
12	1_3	3_2	3_2	4_0	4_2	3_5	13
16	0_3	1_2	1_2	1_7	1_8	1_5	13
			100 °C				
1	9_5	7_9	7_9	7_4	7_3	7_3	7_5
2	12	12	11	11	11	11	9_8
3	12	12	12	12	12	12	11
4	10	12	12	12	12	12	11
6	6_5	9_6	9_3	9_9	11	11	12
8	3_6	6_3	6_4	7_2	7_2	7_6	12
9	2_6	5_1	5_2	6_0	6_3	6_4	12
12	0_9	2_5	2_6	3_2	3_5	3_5	12
16	0_2	0_9	0_9	1_3	1_4	1_4	12

TABLE 132. *Values of the Debye-Hückel constants for activity coefficients based on the values of the dielectric constant of water determined by Owen et al. [12]*

t °C	ϵ [a]	A		B	
		Weight basis	Volume basis	Weight basis	Volume basis
		$kg^{1/2}\ mol^{-1/2}$	$l^{1/2}\ mol^{-1/2}$	$kg^{1/2}10^{8}\ cm\ mol^{-1/2}$	$l^{1/2}10^{8}\ cm\ mol^{-1/2}$
0	87.90	0.4905	0.4905	0.3245	0.3246
5	85.90	.4941	.4941	.3254	.3254
10	83.95	.4979	.4979	.3262	.3262
15	82.04	.5018	.5021	.3270	.3271
18	80.93	.5042	.5045	.3274	.3276
20	80.18	.5059	.5064	.3277	.3280
25	78.36	.5103	.5110	.3285	.3290
30	76.58	.5148	.5159	.3294	.3301
35	74.85	.5194	.5209	.3302	.3311
38	73.83	.5223	.5241	.3307	.3318
40	73.15	.5243	.5263	.3310	.3323
45	71.50	.5293	.5319	.3318	.3334
50	69.88	.5345	.5378	.3327	.3347
55	68.30	.5400	.5439	.3335	.3359
60	66.76	.5455	.5502	.3344	.3372
65	65.25	.5514	.5568	.3353	.3386
70	63.78	.5573	.5636	.3362	.3400
75	62.34	.5635	.5707	.3371	.3414
80	60.93	.5699	.5781	.3380	.3429
85	59.55	.5766	.5859	.3389	.3444
90	58.20	.5835	.5939	.3399	.3459
95	56.88	.5906	.6022	.3409	.3475
100	55.58	.5981	.6110	.3419	.3492

[a] Values for the dielectric constant of water as determined by Owen et al. [12]; values above 70 °C were calculated from their equation expressing ϵ as a function of temperature.

TABLE 133. *Bjerrum's minimum ion-parameter for uni-univalent electrolytes in aqueous solutions from 0 to 100 °C based on the dielectric constant of water determined by Owen et al. [12].*

Temperature	Ion-parameter	Temperature	Ion-parameter
t	a_B	t	a_B
°C	10^8 cm	°C	10^8 cm
(On weight or volume basis)			
0	[a] 3.48(3.49)	50	3.70
5	3.50	55	3.73
10	3.52	60	3.76(3.75)
15	3.53(3.54)	65	3.79(3.78)
18	3.55	70	3.82(3.81)
20	3.56	75	3.85(3.84)
25	3.58	80	3.88
30	3.60	85	3.92(3.91)
35	3.62	90	3.95(3.94)
38	3.64	95	3.99(3.98)
40	3.65	100	4.03(4.02)
45	3.67		

[a] See text for meaning of values given in the parentheses.

TABLE 134. *Differences in activity coefficients for solutions having an ionic strength of 0.1 from those given in the main tables if the dielectric constant of water determined by Owen et al. [12] is used instead of the values of Malmberg and Maryott [5]*

(On volume basis)

Uncertainty $\times 10^5$

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			0 °C				
1	66	55	51	52	50	45	48
2	93	84	77	80	79	71	62
3	97	96	88	93	93	83	67
4	91	97	89	97	97	88	69
6	67	85	77	89	90	80	70
8	43	65	60	72	74	65	69
9	34	56	51	63	65	57	69
12	16	33	30	40	42	37	68
16	5_0	15	13	20	21	18	67
			25 °C				
1	30	25	22	24	23	19	21
2	42	38	33	36	36	30	26
3	43	43	37	42	42	35	27
4	39	43	38	43	43	35	27
6	28	37	32	39	39	33	26
8	18	28	24	31	32	26	26
9	14	23	20	27	27	23	25
12	6_0	13	12	16	17	14	24
16	1_8	5_8	5_0	7_7	8_3	6_9	24

TABLE 134. *Differences in activity coefficients for solutions having an ionic strength of 0.1 from those given in the main tables if the dielectric constant of water determined by Owen et al. [12] is used instead of the values of Malmberg and Maryott [5]*—Continued

(On volume basis)

Uncertainty × 10^5

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			50 °C				
1	−20	−16	−15	−15	−15	−13	−14
2	−27	−24	−22	−24	−23	−20	−18
3	−27	−28	−25	−27	−27	−23	−19
4	−24	−27	−24	−27	−27	−24	−19
6	−17	−22	−20	−24	−25	−21	−19
8	−10	−16	−15	−18	−19	−16	−19
9	-7_7	−14	−12	−16	−16	−14	−19
12	-3_2	-7_4	-6_8	-9_2	-9_8	-8_6	−18
16	-0_9	-3_0	-2_8	-4_1	-4_5	-4_0	−18
			75 °C				
1	−58	−48	−43	−46	−45	−38	−40
2	−76	−71	−63	−68	−68	−58	−49
3	−75	−77	−69	−77	−76	−66	−52
4	−66	−75	−68	−77	−77	−67	−54
6	−43	−60	−54	−65	−66	−57	−52
8	−25	−43	−39	−48	−50	−43	−51
9	−19	−35	−32	−41	−42	−37	−51
12	-7_2	−18	−17	−23	−24	−21	−50
16	-1_8	-6_8	-6_3	-9_5	−10	-9_3	−49
			100 °C				
1	−107	−91	−83	−86	−84	−74	−77
2	−138	−130	−119	−126	−124	−111	−95
3	−133	−140	−128	−138	−138	−124	−101
4	−113	−132	−123	−135	−136	−123	−103
6	−70	−101	−94	−109	−112	−102	−103
8	−38	−68	−65	−79	−82	−75	−103
9	−28	−55	−52	−65	−68	−63	−103
12	-9_7	−27	−25	−34	−37	−34	−102
16	-2_2	-9_2	-8_9	−13	−15	−14	−101

TABLE 135. *Differences in activity coefficients for solutions having an ionic strength of 0.1 from those given in the main tables, if the dielectric constant of water determined by Owen et al. [12] is used instead of the values of Malmberg and Maryott [5]*

(On weight basis)

Uncertainty $\times 10^5$

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			0 °C				
1	66	55	51	52	50	45	49
2	93	84	77	80	79	71	62
3	97	96	88	93	93	83	67
4	91	97	89	97	97	88	69
6	67	85	77	89	90	80	70
8	43	65	60	72	74	65	69
9	34	56	51	63	65	57	69
12	16	33	30	40	42	37	68
16	5_0	15	14	20	21	18	68
			25 °C				
1	25	21	18	20	19	16	17
2	35	31	27	30	30	24	20
3	36	36	30	35	35	28	21
4	33	36	31	36	36	29	20
6	23	30	26	33	33	26	19
8	15	23	20	26	26	21	19
9	13	20	17	22	23	18	18
12	5_1	11	9_4	14	14	11	17
16	1_5	4_8	4_1	6_5	7_0	5_5	17

TABLE 135. *Differences in activity coefficients for solutions having an ionic strength of 0.1 from those given in the main tables, if the dielectric constant of water determined by Owen et al. [12] is used instead of the values of Malmberg and Maryott* [5]—Continued

(On weight basis)

Uncertainty $\times 10^5$

z_+z_-	Debye-Hückel	Güntelberg	Extended Güntelberg	Davies	Scatchard	Extended Scatchard	Bjerrum
			50 °C				
1	−15	−12	−11	−12	−11	−9	−10
2	−20	−18	−16	−18	−18	−14	−12
3	−20	−21	−18	−20	−20	−17	−13
4	−18	−20	−18	−21	−21	−17	−13
6	−13	−17	−15	−18	−18	−15	−12
8	-7_8	−12	−11	−14	−14	−12	−12
9	-5_9	−10	-9_1	−12	−12	−10	−12
12	-2_4	-5_7	-5_0	-7_1	-7_4	-6_2	−11
16	-0_7	-2_3	-2_0	-3_2	-3_4	-2_9	−11
			75 °C				
1	−55	−49	−44	−46	−45	−39	−41
2	−77	−71	−64	−69	−68	−59	−50
3	−77	−78	−70	−78	−77	−67	−52
4	−68	−76	−69	−78	−78	−67	−53
6	−45	−62	−55	−66	−67	−58	−52
8	−26	−44	−40	−50	−51	−45	−52
9	−20	−36	−33	−42	−44	−38	−51
12	-7_7	−19	−17	−24	−25	−22	−50
16	-2_0	-7_3	-6_6	−10	−11	-9_7	−50
			100 °C				
1	−104	−88	−79	−83	−81	−70	−73
2	−134	−126	−113	−122	−121	−105	−88
3	−130	−136	−122	−135	−135	−117	−92
4	−113	−130	−118	−133	−134	−116	−93
6	−71	−101	−91	−109	−111	−97	−92
8	−40	−69	−63	−79	−82	−72	−92
9	−29	−56	−51	−66	−69	−61	−91
12	−10	−28	−26	−35	−38	−34	−89
16	-2_4	-9_9	-9_1	−14	−16	−14	−88

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